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STUDENT BEHAVIORAL ENGAGEMENT OF FIFTH-GRADE GIFTED STUDENTS IN A GENERAL EDUCATION CLASS

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STUDENT BEHAVIORAL ENGAGEMENT OF FIFTH-GRADE GIFTED
STUDENTS IN A GENERAL EDUCATION CLASS

A Dissertation
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
in
Educational Leadership

by
Charron Ann McIntyre Rodríguez
December 2016

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ABSTRACT

This observational study surveyed the engagement of fifth-grade gifted students who spend the majority of their academic day in a general education classroom. This study looked at students in a K-6 public school district in Southern California. This study was a qualitative study with some quantitative data to confirm observational findings. The methods included observations, observational notes, audio and video recordings. After the observations the recordings were reviewed to assure the observational notes accurately portrayed the actions of the target students. The measures included student surveys, observational data via the Behavioral Observation of Students in Schools instrument, and teacher interviews. The short response portion of the student surveys and the teacher interviews were coded and analyzed for common themes. The research questions that dictated the direction of this study included: Is student engagement altered by use of differentiated curriculum, if so is it increased or decreased with more appropriate assignments for gifted students? Do students put forth the same effort with more complex assignments as with easier assignments? Do fifth-grade gifted students show signs of a lack of student engagement? Further research may include expanding the study to include more students from various school districts to ascertain if the findings are consistent with other groups of students.

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An Igbo and Yoruba (Nigeria) proverb says, “It takes a whole village to raise a child” (Healey & Salaam, 1998). Though it certainly does take many individuals playing a part to successfully raise a child, this saying is equally true for an individual completing their doctoral degree. It is my personal village that I wish to thank for their part in the completion of my degree.

First and foremost, I want to thank God for the direction of my life. I never saw myself returning to school yet He arranged my circumstances so it was a logical choice. This would have been amazing if it had happened once but this was true each time I returned to school; that is divine intervention.

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DEDICATION

To Art and Janet for unending love and support

TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES.....	ix
CHAPTER ONE: INTRODUCTION	
Statement of the Problem.....	1
Background	4
Conceptual Framework	4
Constructs.....	5
Purpose of the Study.....	6
Research Questions.....	6
Significance of the Study.....	7
Delimitations.....	8
Definition of Key Terms	9
Summary.....	10
CHAPTER TWO: LITERATURE REVIEW	
Introduction	11
Historical Background	14
Giftedness.....	16
Challenges and Needs of Gifted Students	17
Gifted Programs and Current Practices	21
Classroom Models for Gifted Instruction	23
Educational Strategies Used for Gifted Learners	24
Focus on Differentiation as Instructional Model.....	31

Underachievement	36
Student Engagement	37
Effects of Student Engagement on Learning.....	42
Building and Strengthening Student Engagement.....	43
Theoretical Underpinnings	46
Conclusion	47
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY	
Introduction	49
Participants and Setting	49
Participation Permission Procedures	51
Limitations and Disclosures.....	53
Methods	53
Instrument	55
Data Collection.....	56
Data Analysis	57
CHAPTER FOUR: RESULTS	58
Introduction	58
Data Analysis and Examples.....	60
Key Findings	72
Implications	75
Summary.....	76
CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS	
Introduction	81
Conclusion	82

Limitations	83
Future Research and Recommendations.....	84
Teacher Interview Themes.....	85
Implications for Educational Leaders and Educators	86
APPENDIX A: INSTITUTIONAL REVIEW BOARD LETTER OF APPROVAL.....	88
APPENDIX B: PARENT INFORMATION FLIER	90
APPENDIX C: STUDENT ENGAGEMENT SCALE	92
APPENDIX D: PARENT INFORMED CONSENT WITH INSTITUTIONAL REVIEW BOARD APPROVAL—ENGLISH	95
APPENDIX E: PARENT INFORMED CONSENT WITH INSTITUTIONAL REVIEW BOARD APPROVAL—SPANISH	98
APPENDIX F: TEACHER INTERVIEW QUESTIONS	101
APPENDIX G: TEACHER INFORMED CONSENT	103
APPENDIX H: ASSENT.....	107
APPENDIX I: DISTRICT LETTER OF SUPPORT.....	109
APPENDIX J: OBSERVATIONAL NOTES	111
APPENDIX K: STUDENT SURVEY RESPONSES	119
REFERENCES.....	130

LIST OF TABLES

Table 1.	Definitions of Gifted	18
Table 2.	Percent of Activities in Which Gifted Students Received Differentiated Experiences.....	34
Table 3.	Definitions of Student Engagement	38
Table 4.	Three Components of Student Engagement	41
Table 5.	Evidence of Engagement or Nonengagement Behaviors	57
Table 6.	Participant Demographics.....	59
Table 7.	BOSS Observation Results Summary Table	66
Table 8.	Student Engagement Survey Mean Responses	68
Table 9.	Themes: Student Surveys	70
Table 10.	Themes: Teacher Interviews.....	71

CHAPTER ONE

INTRODUCTION

Gifted students need an education consistent with their abilities. This has been the belief for over one hundred years (Terman, 1916, p. 4); however, these students still have many hours of class they are not learning which leads to disengagement. This disengagement has a negative effect on the students learning, some gifted students choosing to leave school all together.

Statement of the Problem

Students are dropping out of school at high numbers each day; this includes gifted students who are opting to discontinue their education (Reis, 2013; Renzulli & Park 2000, p. 5; Zablowksi, 2010, p. 12). Gifted students who drop out of school are harmful to the student and society. Jensen (2013) associated student dropout with student boredom and lack of focus resulting in school dropout in numbers greater than 7,000 a day, among these students are gifted students. Jensen calculated the cost to our nation at 1.2 million dollars a year in economic impact. Through the course of a lifetime that can amount to three quarters of a million dollars per student dropout. This is a significant problem that is affecting the United States. Landis and Reschly discussing the No Child Left Behind Act of 2004 note the quandary educators have with the concept of gifted dropouts (2013, p. 221). The notion of dropout generally conjures up the image of students who are academically incapable, struggling for

years to meet minimal expectations. However, this is not true for gifted students. Gifted students are able to accomplish the academic task presented to them, however, they are opting not to do so. Rather, the issue is students are disenfranchised with their education.

Academic engagement is known to diminish for students starting in the upper elementary years (Connor and Pope, 2013, p. 1427). Yet engagement is a necessary component in education. Due to increased abilities, students identified as gifted and talented suffer from academic boredom and disengagement more often than their grade level general education peers. Gifted students in California are most often educated in general education classrooms with few assignments or instruction designed at their ability level (Archanbault, Westberg, Brown, Hallmark, Emmons, and Zhag, 1993, p. 29). This forces the gifted student to sit through many hours of class completing hundreds of assignments which are of little benefit to their actual learning, simply because their abilities are beyond their typical grade level peers. This uninspired time results in students who become disengaged, bored, and disenfranchised with the educational process. There is a fundamental need to alleviate boredom and the downward spiral toward dropout, to keep students engaged (Bridgeland, Dilulio, & Morison, 2006, p. 3) however, this is even more significant a need with gifted students as the boredom is increased exponentially with the students' ability level.

Research has been conducted with students, gifted and nongifted displaying signs of attraction, persistence, and delight with work (Mendes, 2010,

p. 12). Research has found a decline in these attributes as students get older (Goldspink & Foster, 2013, p. 291). Studies have found the amount students exhibit tenacity, desirability, and pleasure with assignments begins to decline in the upper elementary grades (fourth, fifth, and sixth grades) at which time, Arlin writes, some students begin to display difficulty with cognitive demands of some academic tasks (Frank, 1984, p. 107); Erickson notes, students are also seeking to establish a new identity (1980, p. 109). Focus has then been on intervention of high school and middle school students, who have been described as demonstrating behaviors counter to those described above over an extended period of time. Educators and students alike should not have to wait through several years of failure to truly enjoy one's education in order to begin intervention (Zablowski, 2010, p. 3). If a student can be recognized as displaying these signs and if intervention begins at a younger age, can the student's future path be altered?

This study will address the outward manifestations of a failure to show behaviors consistent with tenacity, desirability, and pleasure with assignments; how is this presented in class? Conner and Pope found the initial decline of these attributes begins in elementary school (2013, p. 1427). Are students equally attracted to academic tasks with generic classroom assignments, one-size-fits-all, as with assignments designated to their ability level? If students are provided lessons and assignments consistent with their abilities with regularity, does this benefit engagement as opposed to only occasionally? Is there a

frequency tipping point? This report provides the rationale and procedures for this observational study which is supported with quantitative measures.

Background

Gifted students have been a documented part of education for over a hundred years. For the past century there has also been a resounding statement that gifted students should receive an education consistent with their abilities (Terman, 1916; Marland, 1971; Reis and Boeve, 2009, p. 206). In contrast however, in many classes there are gifted students being educated with students of all abilities. Most of the students in the class, despite abilities, receive the same instruction, assignments, and expectations (Westberg, Archambault, Dobyms, and Salvin, 1993, p. 45). Perhaps the most famous crusader for gifted education was Dr. Terman who began to study gifted students in the early 1900s who wrote, "The remedy, of course, is to measure out the work for each child in proportion to his mental ability" (Terman, 1916, p. 4). Terman expressed to deny gifted students of an appropriate education was detrimental to the individual students and the country (1916, p. 5).

Conceptual Framework

There are many facets which affect the education of students. This study focused on observation and describing the outcomes of a differentiated education (being specific assignments and instruction related to students' abilities), on the academic engagement of gifted students via an observational

case study. Student engagement, including academic engagement is difficult to measure, so this study employed various methods to operationalize academic engagement as it is stated in Education 2012, "Student engagement is hard to define but said you know it when you see it" (p.1).

This study was guided by previous studies focusing on in-class differentiation for gifted elementary students as well as studies on student engagement. Many of the studies in student engagement are with high school and college students though engagement is known to begin to diminish at the upper elementary grades (Goldspink and Foster, 2013, p. 292). This study focused on students in fifth grade as that is when academic engagement is thought to begin to diminish. This study is a qualitative study using observations, surveys, and interviews. Participants were observed within their regular class assignment providing little instructional interruption. Considering the population and the effects of such a study, efforts were taken to limit interaction with the investigator and time away from planned study. This assured the least amount of interference or impact on this study or the students' educational program. The areas of program design, expectations, curriculum, social and emotional support, curriculum and pedagogy were examined.

Constructs

This case study sought to uncover, understand, and describe the experiences of a selected group of gifted fifth-grade students in a general education classroom to determine if these students were beginning to

demonstrate signs of disengagement such as boredom, lack of interest, failure to persist at a problem. To appropriately study this population, recorded class observations, surveys, and interviews were used. The student experiences were synthesized and described. Care was taken at the end of the observational sessions to assure students understood and were able to appropriately answer each question of the Student Engagement Scale.

Purpose of the Study

The purpose of this study was to observe gifted students noting possible indicators of engagement, as well as, to possibly identify methods to maintain or restore a passion for learning with a focus on gifted children learning in a general education classroom. The general education classroom at this school includes general education students, special education students, and gifted students.

This study focused on if and if so, how the level of tenacity, desirability, and pleasure with assignments changed when gifted students were provided a different kind of instruction. Once students begin to display negative behaviors with regard to their assignment completion and focusing on academic tasks, is there a way to jump start them back? How can one reverse negative academic behaviors? What is the critical juncture?

Research Questions

The research questions (RQs) that dictated the direction of this study include:

- RQ 1. Is student engagement altered by use of differentiated curriculum, if so is it increased or decreased with more appropriate assignments for gifted students?
- RQ 2. Do students put forth the same effort with more complex assignments as with easier assignments?
- RQ 3. Does this study of gifted fifth-grade students shed light on prior research finding that tell of a continual downslide of engagement beginning in sixth grade? If so, what was observed and how does that inform future research?

Significance of the Study

Many educational concepts originate in the study of how to best teach gifted students. The results can then be applied to the general and special education populations. There is an understanding that once a benefit can be found for gifted students, a similar benefit may be found for alternate populations (Tomlinson, Kaplan, Renzulli, Purcell, Leppien, & Burns, 2002, p. 4). This study adds to the body of knowledge on gifted education and student engagement particularly with students in elementary school.

This study looked at teacher practice as this is an important component of differentiation. An assumption of the study was an increase in academic engagement of gifted students would reduce students' dropout of this population, the impact of which is far reaching (Terman, 1916, p. 45). A prospective influence would be to educators. As educators understand the significance of

their position and seek to increase the engagement of their students, the effects will be beyond measure. The anticipated increased engagement of students will be presented to teachers in hopes there will be a change in pedagogy which would have a significant impact on student learners, gifted and nongifted.

There has not been a study on the significance of differentiated curriculum and its impact on student engagement of gifted elementary students. This study sought to determine the potential impact of differentiated curriculum with regard to engagement. Students who have the potential to achieve or complete designated assignments, yet are not compelled to do so, are underachieving and disengaged (Conner and Pope, 2013, p. 1427). This underachievement and disengagement have a snowball effect on the student's education. Despite the belief that differentiation is beneficial to students, a survey conducted across the United States found teachers do not differentiate eighty-four percent of the time (Westberg et al., 1993, p. 45; Pfeiffer, 2003, p. 166).

Delimitations

This study used a small sample size which is a sample of convenience and as such may not be generalizable to all populations. This study looked at a specific population of gifted students in one specific grade and may not be inclusive of all engagement or disengagement manifestations. The students were from a single school district in Southern California and may not include all subgroups. The population was anticipated to be diverse as are the abilities or degrees of giftedness and engagement.

Definition of Key Terms

Differentiation: The California Association for the Gifted (CAG) defines differentiation as

the modification of the curriculum to meet the unique needs of learners. It may include modifications in complexity, depth, pacing, and selecting among, rather than covering all, of the curriculum areas. The modification is dependent on the individual needs of the students. CAG advocates for differentiation for all students in need of curriculum modification. There should be multiple paths for success in all classrooms. The major purpose of differentiation in the gifted program is to challenge the gifted student. (CAG, 2007)

Gifted: One difficulty is the variety of definitions of the term gifted; some expert definitions are found in Table 1. This study uses the following definition:

Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities. (NAGC, 2012)

Student engagement: An equally difficult concept to define is student engagement (see Table 3). The definitions of student engagement contain a lot of overlap and agreement. For the purposes of this study this researcher used a definition derived from Schleaty. Students who are engaged exhibit three characteristics: (a) they are attracted to their work, (b) they persist in their work

despite challenges and obstacles, and (c) they take visible delight in accomplishing their work (Schlechy, 1994, p. 8).

Summary

There are a significant number of gifted students who drop out of school, most citing boredom or a lack of adult influence or caring (both parent and educators) (Zabloski, 2010, p. 142). This choice has a life altering effect on the students and their families. The difference in annual income between a high school dropout and a high school graduate is over ten thousand dollars according to the latest US Census Report (Breslow, 2012, p.1). This is just one significant difference between graduates and dropouts, unfortunately there are others such as unemployment, life of poverty, and incarceration. Understanding the significance of a students' choice to drop out of school is detrimental. impacting their families, however when one opts to do so with significantly higher academic ability than students who complete high school, one needs to question what impacts this decision and how can this choice be altered.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The purpose of attending school each day is simply to learn. Students acquire new information in an attempt to ready oneself for the future. At least one group of students however, are not receiving the education they deserve while they attend school. Rather than acquiring new information or prepare for their future, they sit in classes, being “taught” information they already understand (Brown & Abernathy, 2009, p. 55; Zabloski, 2010, p. 33). This leads to boredom and a lack of engagement in education (Appleton, Christenson, & Furlong, 2008, p. 369; Bradford, 2005, p. 29). Boredom is the highest ranked reason as to why students, gifted and nongifted, drop out of school. Goldspink and Foster note 98% of students studied reported boredom while at school (2013, p. 292). Lack of challenging curriculum and stifling teacher pedagogy are factors that contribute to student boredom (Zabloski, 2010, p. 32-33). Peters points out, if a child is disinterested in their academics or does not feel it applies to them, the teaching style is indifferent (2012, p. 177).

Gifted students are frequently used in class as peer tutors, which addresses their ego and promotes socialization, nevertheless this does not provide for academic stimulation or development, which at the risk of being redundant is why they are in school (Huss, 2006, p. 20). All students, including gifted students, should receive instruction consistent with their ability level in

order to gain the most of their education (Hansen, 1992, p. 2; Tomlinson, 1999, p. 11). This is where many gifted students are failed by the educational system. Rogers notes, "A child with an IQ of 130 learns at a rate 8 times faster than a child with an IQ of 70" (2007, p. 391). Teachers, due to No Child Left Behind (NCLB), have altered the class focus to the basic or average child or those working at or below the grade level expectations (Huss, 2006, p. 20; Fuller, Wright, Gesicki, & Kang, 2007, p. 271; Mendoza, 2006, p. 2). Freedburg noted in 2010 over fifty percent of California schools were not demonstrating the required proficiency and as such were in Program Improvement (PI) (p. 1). This has increased to 72 percent of Title 1 schools not meeting the basic standard as of the 2011 assessment results (CDE a, 2013). With all of this emphasis on basic education needs, gifted students are left to spend their time in an environment that is not conducive to their learning. The result is students who meander through their education with infrequent periods of active academic participation as well as being disenfranchised with education in general. These students do not work to their potential as they are being expected to conform daily to the potential of the average student (Rogers, 2002, p. 5; Winner, 1996, p. 244).

Gifted students see much of their educational stint as a waste of time and effort. Tomlinson found there is a significant benefit to differentiation, that is providing all students with work that is moderately challenging, instruction and/or assignments, while focusing on each student's academic needs (1999, p. 19).

However, differentiation does not occur in classes with regularity (Westburg, et al, 1993, p. 5; Newman, 2008, p. 3).

A report on gifted education completed in 1971 notes:

A conservative estimate of the number of gifted and talented from total elementary and secondary school population of 51.6 million is 1.5 to 2.5 million; existing services for the gifted serve only a small percentage of the total; differentiated education for the gifted and talented is perceived as low priority at Federal, state, and most local levels of government; 21 states have legislation to provide services but in many cases this merely represents intent; services for the gifted can and do produce significant outcomes. (Marland, p. 1)

Despite these concerns two generations ago, little has changed with regard to the number of students who actually receive an education which works to build on their skills and knowledge (Reis, 2013). This leads the students to boredom which can result in disengagement and misbehavior. Still paramount is the usurping of the gifted student's educational development. A review of literature including Rogers on gifted education and student engagement brings to light areas of need in the education of gifted students (2002, p. 4-8). Burney notes, though there is no common definition of giftedness (see Table 1), there is agreement that gifted students need challenge and interest in their academic career (2008, p. 130). For students to retain the information learned, the

information must be delivered consistent with the student's abilities, this is true for all students (Rogers, 2007, p. 390).

Tyack and Cuban, (1995) discuss gifted student education framing the issue from a historical perspective. As they reference school issues in 1909 they state, "Academically talented students experience another kind of 'waste' as they marked time academically in the standard pace of the grades until they qualified for entrance to high school" (p. 70). Why then is there not reform that helps assure our gifted students the education noted in the Constitution as a basic right of property, a free and appropriate public education?

Historical Background

Gifted students have been studied for over one hundred and fifty years. Francis Galton in 1865, in *Hereditary, Talent, and Character* looked at a child's intelligence and found both parents to contribute to the intelligence of a child, a controversial view at the time. Terman, in 1905 titled his dissertation, "Genius and Stupidity: A Study of the Intellectual Processes of Seven 'Bright' and Seven 'Stupid' Boys." Terman revised the existing Binet intelligence test to the Stanford Revision of the Binet-Simon Scale (Online Computer Library Center, 2005 p. 2). This Intelligence Quotient (IQ) test worked to identify students with exceptional potential. Terman went on to study a select group of the students he identified through IQ testing for the rest of his life. Upon his death his study was continued by other individuals, either participants themselves or other professionals (Goleman, 1995, p. c1; Terman, 1916, p. 5; Friedman and Martin, 2011, p. 1).

Many theories of gifted children can be traced back to Galton's and Terman's studies (Galton, 1865). Terman is quoted from his 1916 study that gifted children need an education that is consistent with their abilities, stating "[Bright children] are rarely given tasks which call forth their best ability, and as a result they run the risk of falling into lifelong habits of submaximum efficiency" (Online Computer Library Center 2005, p. 3). Terman also wrote "The future welfare of our country hinges, in no small degree, upon the right education of these superior children" (1916, p. 5). This has been echoed in current studies by other experts (Hansen, 1992, p.2, Renzulli, 2011, p. 306). Despite these findings, most gifted students are educated in general education classes with little to no differentiation (Westberg et al., 1993, p. 44). "The primary reason to identify highly gifted children is to help them get a better education" (Hansen, 1992, p. 1). Westberg, Archambault, Dobyns, and Salvin found that nearly eighty-four percent of the time there is no differentiation in the general education class with regard to instruction or assignments for the gifted student, see Table 2 (1993, p. 45). This lack of identifying and addressing student's particular academic needs based on their abilities leads to a deficiency in student engagement, that is, the students have limited interest in the assignments or even in attending class. This lack of challenge, limited engagement, and efficiency at which gifted students can complete a grade level or more challenging assignments has had detrimental effects including the school dropout for many gifted students as Peterson found in his recent study (2009, p. 282). Conner and Pope state that one third of the

students they surveyed note a lack of challenge with the assignments as the primary reason for their boredom while at school (2013, p. 1427). Winner writes that not providing sufficient challenge provides a gifted student with, “daily practice in idleness and day-dreaming” (1996, p. 246). Burney states the need for, “appropriately differentiated curriculum and instruction in order to optimize their development” (2008, p. 138; Tomlinson, 1999, p. 19). This need to differentiate also works to ensure student engagement (Lynch, Patten, & Hennessy, 2013, 293).

Giftedness

The term gifted or giftedness with regard to a student is difficult to define; one study found over 200 definitions (Page, 2011, p. 12). Some believe giftedness is nothing more than a method of categorizing students (Pfeiffer, 2011, p. 3). Special education students have certain criteria they must meet by law to be qualified. However, in many states, gifted students have no federal, state, county, or city designation criteria. A major difficulty with gifted education begins with the myriad of identification methods or even definitions (Reis & McCoach, 2000, p. 154; Stephens, 2011, p. 306). The criteria is set by individual school districts (Stephens, 2011, p. 314). Though the qualification criteria generally contains an intelligence quotient (IQ) test, there are other qualifying criteria such as: classroom grades, summative state test scores, special factors such as second language learner or low socioeconomic status, parent recommendation, teacher recommendation, there may or may not be an artistic

qualifier. Each district then decides how much weight to put on each criterion. Is the IQ test the most important factor? Are the grades really important since classroom grades can be subjective (Reis & McCoach, 2000, p. 155)? Experts note a high IQ score is not synonymous for giftedness (Pfeiffer, 2011, p. 4). In the end, the student's acceptance to a gifted program is dependent largely on the district the student attends. "The lack of cohesive and comprehensive policies pertaining to identification and programming for these students has created a disparity in services across the states" (Stephens, 2011, p. 306; Pfeiffer, 2003, p. 163; Brown & Abernathy, 2009, p. 52). Professionals have sought to define the term gifted (see Table 1).

For the purposes of this study, the definition of the National Association of Gifted Children will be used. This definition denoted students may be gifted in one or more curricular areas and recognizes the finding that qualification into gifted programs should be based, though not entirely, on potential or ability.

Challenges and Needs of Gifted Students

There is little disagreement that learners with high abilities or gifted learners benefit from learning materials and experiences that are both interesting and challenging which assists in the development of potential (Burney, 2008, p. 130; Tomlinson 1999, p. 19; Tyack & Cuban, 1995, p. 70; Terman, 1916, p. 6). Like all students, gifted students need assignments that, "stimulate their curiosity, permit them to express their creativity, and foster positive relationships with others" (Strong, Silver, & Robinson, 1995, p. 8). Strong, Silver, and

Table 1

Definitions of Gifted

Source	Definition
Danielian, J. (2012). National Association of Gifted Children http://www.nagc.org/GlossaryofTerms	"Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities." [Title IX, Part A, Definition 22 (2002).]
US Office of Educational Research and Improvement (OERI) (1993) ed.gov	In the report titled National Excellence and Developing Talent, the term "gifted" was dropped. This definition uses the term "outstanding talent" and concludes with the sentence: "Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor."
California State Department of Education (CDE, 2013) Gifted and Talented Education Program Guide cde.ca.gov	"Gifted and talented pupil" means a pupil enrolled in a public elementary or secondary school who is identified as possessing demonstrated or potential abilities that give evidence of high performance capability. EC Section 52201 last modified Feb. 22, 2013
Renzulli (1978) http://www.education.com Makes Giftedness: Reexamining a Definition	Gifted behavior occurs when there is an interaction among three basic clusters of human traits: above-average general and/or specific abilities, high levels of task commitment (motivation), and high levels of creativity.
Gagne (1985) Giftedness and talent: Reexamining a reexamination of the definition.	The term giftedness designates the possession and use of untrained and spontaneously expressed natural abilities (called aptitudes or gifts) in at least one ability domain to a degree that places a child among the top 10% of his or her age peers.
Morelock (1992) http://www.davidsongifted.org/db/Articles_id_10172.aspx	Giftedness is asynchronous development in which advanced cognitive abilities and heightened intensity combine to create inner experiences and awareness that are qualitatively different from the norm.
Marland (1971) Former U. S. Commissioner of Education in his August 1971 report to Congress	"Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society."

Robinson conclude that to develop or continue to arouse curiosity, the topic of an assignment or investigation provided should be contradictory, that is have two opposing sides, and should relate to the student's life (p. 11). One can only imagine what drudgery it would be to go to class daily to relearn that $2 + 2 = 4$, and then sit through daily demonstrations of how $2 + 2$ always comes out to be 4. Yet this is essentially what the gifted child is subjected to for the convenience of education. In general, a student will begin to show signs of noncomplacency at about age ten or the fourth or fifth grade (Landis & Reschly, 2013, p 232; Finn & Cox, 1992, p. 159; Marks, 2000, p. 155). This lack of interest in school quickly affects a student's feeling of belonging and interest in school or academics.

Fredricks, Blumenfield, & Paris note the problems with student disinterest and failure to apply themselves academically begin in elementary school and can continue to have negative effects for the student for many years (2004, p. 75).

Another study found full engagement to be more common among the students of younger age which declines as the student raises in grade levels (Conner & Pope, 2013, p. 1438; Goldspink & Foster, 2013, p. 291). The once eager student is replaced with a student who is removed and distant from their education, completing the assignments not to learn, instead being compliant so they do not get into trouble. However, this study did not look at differentiation and the potential benefits to a student's interest, engagement, and application or expansion of knowledge and skills. Brown and Abernathy cite a U.S. Department of Education report from 1993 stating, "Gifted students already have mastered

approximately 30 percent of the curriculum to be taught” before the teacher has instructed the lesson (2009, p. 53). This finding is agreed upon by other experts (Westberg, et al, 1993, p. 2). This is unchallenging and uninteresting to gifted students.

The needs of gifted students include, “learning activities that are challenging, involve greater depths of inquiry, and incorporate opportunities for students to develop advanced products grounded in real-world issues” (Bangel, Moon, & Capobianco, 2010, p. 210; Stephens 2011, p. 310, Pfeiffer, 2003, p. 165, Housand & Housand, 2012, p. 707). These needs are consistent if the gifted student is in a designated classroom or as most gifted students today, in a general education classroom (Newman, 2008, p. 35; Westberg, et al., 1993, p. 3). The mission statement for the California Department of Education notes, “California will provide a world-class education for all students, from early childhood to adulthood” (*CDE*), this should include educating gifted students.

Gifted students benefit from some choice in their education (Housand & Housand, 2012, p. 707) as well as an appropriate level of challenge. Students surveyed report a lack of challenge along with teachers assigning irrelevant busy work as a reason for their becoming disenfranchised with education (Landis & Reschly, 2013, p. 237). One difficulty is the inability to treat gifted students as a single unit (SENG Gifted, 2011, p. 2). Gifted students, as all students, have a variety of interests and abilities. The gifted student benefits from lessons designed for their particular aptitudes and interests. “Services for gifted learners

must be likened to the student's level of achievement to ensure student growth" (Brown & Abernathy 2009, p. 55). Gifted students need to be not only consumers of knowledge, but producers (Newman, 2008, p. 35, Renzulli, 2012, p151). To successfully accomplish this there is a need to develop thinking skills which have declined as a result of NCLB (Newman, 2008, p. 37).

Despite the academic challenge needed for gifted students (SENG Gifted, 2011, p. 1), the "State of the States" report generated every two years by the National Association for Gifted Children reported only thirty-two percent of states reporting had a mandate for identification or services for gifted programs, and eight of the states reported they provide no funding for gifted programs (NAGC, 2015). Within the states that do fund gifted programs there is a large disparity, some states funding one million dollars, others earmark approximately forty million dollars to fund said programs. Currently California does not fund gifted education. Similarly there is an inequality in teacher training with only three states requiring all teachers to receive training in gifted strategies. (Tomlinson, 2001, p. 2; Stephens, 2011, p. 310; Westberg et al, 1993, p. 45).

Gifted Programs and Current Practices

Current United States legislation for education has emphasized the needs of the at-risk or below grade level student. No Child Left Behind has forced school districts, schools, and teachers to focus the larger portion of their time, energy, and fiscal resources on moving the lower achieving students academically to a higher proficiency band (Stephens, 2011, p. 309; Newman,

2008, p. 35; U.S. Dept. of Ed, 2001). This has all too often left the gifted student to feel forgotten or ignored which in turn leads to academic boredom (Stephens, 2011, p. 307). Minimal gains have been the result of NCLB for many gifted learners, although there is difficulty demonstrating gains once a student has attained a top score in a particular academic category, which is often the case with gifted students. A phenomenological study by Zabloski found eight specific needs within the educational environment as identified by adults who were, as children, identified as gifted students: “individual attention, challenging curriculum, unique pace, independent study, higher level thinking skills, technological applications, social interaction, and caring teachers” (2010, p. 37; Kaplan, 2009, p. 259). The Every Student Succeeds Act (ESSA) was signed into effect by President Obama in December 2015. ESSA replaces NCLB, however the focus is unchanged. The concentration of ESSA is for the states to develop identification and intervention supports for the schools testing at the bottom 5% in statewide and federal measures (U.S. Dept. of Ed., 2016).

Currently classroom teachers make few modifications in the curriculum presented to the gifted learner (Brown & Abernathy, 2009, p. 55). Westberg, Archambault, Dobyys, and Slavin (1993, p. 29) found that there was a failure to alter the curriculum or instruction eighty-four percent of the time. A difficulty with gifted education is, Renzulli writes, “Without sound underlying theory—and the will to stick to the charted course—what happens in the classroom is often a reaction to political commercial interests or the whim of bureaucratic policy

makers far removed from classroom” (2012, p. 150). A recent survey of empirical studies found a divide between the federal recommendations, current research, and classroom practices (Dai, Swanson, & Cheng, 2011, 137).

Classroom Models for Gifted Instruction

Currently there is not a federal standard or obligatory education for gifted students separate from the requirement to attend school. Likewise, California does not have a standard of education equivalent to their abilities for the students working above grade level. Instead, California offers unspecific guidelines or recommendations. In a study conducted over twenty years ago, it was determined that over sixty percent of the teachers studied had not received instruction on gifted practices (Archambault et al, 1993, p. xv) yet teachers are expected to know how to adapt the curriculum to benefit all students (Blankstein, Cole, & Houston, 2007, p. 70). Unfortunately, California does not fund gifted education so there has been minimal change to G.A.T.E. teacher training. Despite this finding there has been limited change in the practice of providing gifted education to teachers. Add to this the federal push of NCLB for all students to demonstrate academic proficiency by 2014 and ESSA with a focus on the lowest 5%, which has schools focusing their education efforts on students meeting academic proficiencies on their summative assessments. This has district and school resources spent with a focus on students not meeting the minimal proficiency set forth under NCLB (Stephens, 2011, p. 306-307) and the

new ESSA. Many schools are offering lunch or after school tutoring or workshops, while gifted students receive minimal if any additional services.

Gifted education is negatively affected by the following: (a) no federal or state direction, (b) little teacher training for gifted education, and (c) an emphasis on the underachieving child to assure No Child Left Behind (NCLB)/Every Student Succeeds Act (ESSA) compliance (Mendoza, 2006, p. 7; Stephens, 2011, p. 313; Westberg et al., 1993, p. 46; Bangel, Moon, & Capobianco, 2010, p. 218). All of these things work together to the detriment of educating the gifted learner. In the classroom, teachers infrequently sample various strategies to stimulate the gifted learner, though the use is rare and inconsistent (Mendoza, 2006, p. 2).

Educational Strategies Used for Gifted Learners

The current practices or strategies to educate gifted students vary greatly, however, there are strategies that have been identified as beneficial in the research literature that are advantageous for educating gifted students. The research includes: Icons of Depth and Complexity (Kaplan & Gould, 1998, p. 10), learning menus, curriculum compacting (Reis and Renzulli, 2009), advancement through grades, and Triad Learning Models (Renzulli, 1977, p. 18). The general education teacher in California may have been trained in one or rarely two of these strategies. In California, gifted education strategies are not a required area of study in liberal studies or teacher preparation/credential requirements. Gifted students, just like general education students, become bored with a single

method of delivery. These educational strategies are beneficial independently, however when used together, they are complementary. Teachers can implement strategies to assure all students are learning, not just present every day.

Icons of Depth and Complexity

The icons of depth and complexity are a strategy presented by Kaplan and Gould (1998, p. 10). The idea works with gifted clusters within the general education experience or with whole group gifted education. Recent adoptions have been made to use this strategy for whole class including gifted students, students at and below grade level, and special education students. The students are expected to delve and respond using higher levels of thinking even within a general education lesson. This strategy boasts benefits for all learners. This strategy is easy for the classroom teacher to employ. The various icons each have a different focus including: ethical issues, trends, rules, details, multiple perspectives, changes over time, and others. In each lesson the students view the lesson through a different lens to take a closer look at a different aspect, moving beyond what is printed in the text, moving to a deeper and more complex understanding of any given topic or curricular area (Flournoy, Hazelton, Kaplan, Manzone, Thornsberry, & Williams, 2013, p. 3).

Learning Menus

Learning menus are a rarely used strategy, not because of lack of benefit but due to teachers' unfamiliarity with the strategy. Once students complete classroom assignments to the teacher's satisfaction, they access their learning menu. These menus have pre-selected items that the students can choose from

for the remainder of the designated time. The benefit for the students is that they have some say with regard to their education and time on task is rewarded with self-selected learning activities. The selections focus on expanding content knowledge. This strategy benefits the nongifted students since teachers can then teach the students who require more academic attention. The drawback is that the learning menu design does not usually emphasize or require an increase in critical thinking skills. Learning menus can provide added engagement as students work to self-select their next activity, though it is not true academic engagement as they are only striving to get to the next step, not to actually deepen their learning (Smutny, Walker, & Meckstroth, p. 1997, p. 44).

Curriculum Compacting

The strategy known as curriculum compacting is based on the intellectual level of gifted students. This starts with the educator defining the essential learnings for a given subject and time, then defining how the curriculum will be addressed, finally planning for what will happen when the student has proven a knowledge of the essential curriculum. Knowing gifted students have the ability to work at a quicker or more advanced pace than general education students, the teacher can allow students to work on alternate assignments or work at their own pace skipping curriculum in which they have demonstrated proficiency. However, the students may finish the essential learnings from the grade level textbook in January, and then the teachers must know what is next. Teachers using curriculum compacting have the potential to reignite the joy of learning in gifted children as the students can see a direct benefit of working to their best

ability. The difficulty becomes if this is provided at only one grade level or school, what happens when the child progresses to a new grade or school? All too often the next teacher does not practice the same strategies and the student ends up doing the same curriculum a second year which potentially can increase the student boredom and academic frustration. To be truly beneficial, this would be a school or district policy and the child would not change schools (Pfeiffer, 2003, p. 163).

Test Out

Testing out of a lesson works nicely when applied with another strategy. Students can be given a pretest and if they score according to the given standard, say 90% or better, they are not required to sit through the lesson or do the forthcoming assignment. Another strategy then must be in place as the student should not just sit idle and they should still be expected to learn, hopefully within the content area and hopefully working toward increasing both academic and thinking skills such as outlined in the Revised Bloom's Taxonomy (RBT) (Anderson & Krathwohl, 2001, p. 68). This is a strategy which is easily employed by teachers; however teachers must have a plan on how they will continue the education of the students who pass the pretest (Smutny, Walker, & Meckstroth, 1997, p. 12; Hansen, 1992, p. 2).

Advancing or Skipping Grades

One controversial strategy is advancing or skipping grades. There are differing opinions concerning this strategy as students have a chronological age, a mental age, and an emotional age. By skipping grades or promoting children to

a higher grade, they are no longer in class with students of their chronological or occasionally emotional age. This can lead to problems with social adjustment particularly when the physical development that comes with puberty comes into play. On the other end, gifted students know their academic abilities are not commiserate with their peers and there is already a sense they do not fit in (Colangelo, Assoiline, & Gross, 2004, p. 129; Smutny et al, 1997, p. 176-178).

Triad Learning Model

Triad Learning Model, developed by Joseph Renzulli after his studies with gifted children. The focus is not on a single learning style or strategy but works with the developing of the whole student (Renzulli, Smith, & Reis, 1982, p. 185-186). The triad model has now developed into a SEM Triad Model or a Schoolwide Enrichment Triad Model (Renzulli, 2011, p. 306). The basic triad model consists of learning experiences such as guest speakers and field trips, development of creative thinking and how-to-learn or metacognitive skills, and investigative activities where one researches becoming a firsthand inquirer (Manning, Glasner, & Smooth, 2011, p. 6). As a school wide model this would benefit all students as students work independently at their levels. The teacher's expectations are adjusted with student abilities (Reis & Morales-Taylor, 2010, p. 30).

Independent Study

For families that have not found current choices beneficial to their student's education, they may select Independent Study. Private tutors can be employed as they have been by families with financial means for many

centuries. The difficulty with this strategy as the main educational instruction is that tutors may not have training or the education may come from the parents who may not have the aptitude to teach their children. Many gifted children will out learn their parent's education, having the ability to successfully complete calculus when the gifted student's parent may have only completed college algebra. A parent who is the primary educator for their gifted child cannot instruct a gifted student in a subject matter in which they are not proficient. This makes the education self-limiting. Parents may educate their children well within the area of the parents' academic strength; however the parents may have educational deficits which would then transfer to their children. Independent Study can function through public schools with support of items such as text books. It can also be accomplished through a group consortium, often religious based, an online-based educator, or completely independent. Technology advances have been beneficial to Independent Study such as Salman Kahn's Kahn Academy, a web site which assesses people new to the site and provides individually focused math lessons and assessments via the Internet (Kahn, 2012). Online schools for K–12 have recently begun to advance in their offerings and some do an acceptable job at individualizing the education of the students.

Problem-Based Learning

Problem-Based Learning (PBL) is a strategy that builds on and with a student's interests. It allows the student to self-select a project that is of interest to him/her. The student then follows set criteria to determine if the project meets the outlined academic demands. This strategy can be employed after a student

has tested out of a unit, upon completion of curriculum compacting or of a grade level lesson or section, or while working with differentiating strategies. The student first identifies an area of concern, a problem needing a solution, a phenomenon to investigate, or a decision (David, 2008, p. 80). Based on the understanding of social issues, students may select to study a topic that may be sensitive. The student then works to find valid resources, statistics, and possible solutions to the problem the student has selected. This brings engagement to learning as the gifted student feels some control over their learning as well as interest in the topic the student has selected. Students are not redundantly learning information they already understand, they can seek current sources and input from alternate sources (David, 2008, p. 80; De Grave, Boshuizen, & Schmidt, 1996, p. 322). This also allows for gifted students to become researchers as they search for alternative ways to gain information and find solutions they can employ. The general education and below grade level learner can also benefit if presentations of learning are made. This strategy is difficult for the teacher as it requires the teacher to act as a consultant to assure students are moving forward with their investigations as well as if their daily goals will in fact bring them toward the solution to their proposed problem (David, 2008, pp. 81-82; Barron & Darling-Hammond, 2008, p. 47). Many young students struggle with time management and organization and may need a significant amount of support.

The core idea of project-based learning is that current real-world problems capture students' interest and provoke serious thinking as the students acquire and apply new knowledge in a problem solving context. The student is no longer sitting through learning that does not apply to his/her life. They can feel they have a part in solving an issue that is relevant and meaningful to them (Barron & Darling-Hammond, 2008, p. 47, Crockett, Jukes, & Churches, 2011, p. 89-93).

These strategies are beneficial, though the infrequent employment of these strategies for gifted students in the general education class leads to student boredom. This boredom is observed in classrooms as a lack of academic engagement. Student engagement is comprised of behavioral, cognitive, and emotional disciplines. These strategies are components of differentiation. When used in isolation, strategies can be uninteresting. Jensen (2013) notes if there is suspense of the outcome or next step, it increases curiosity and thus eliminates boredom. However, a removal of boredom is not the only purpose of mixing learning strategies. The purpose is to benefit academic engagement and education.

Focus on Differentiation as Instructional Model

Students benefit from an educational curriculum that is designed for their specific learning abilities. If a student is working above grade level in a particular area, they should be presented assignments consistent with their abilities which includes the content, process, product, and learning environment. A moderate amount of challenge has been proven the most beneficial to a student's

education (Rogers, 2007, p. 390). There have been studies on the benefits of flexible grouping based on a student's abilities (Reis & McCoach, 2000, p. 166). The fluid, flexible groups are usually based on frequent formative assessments (Brulles, Saunders, & Cohn, 2010, p. 346). Differentiation has been a part of education since education began with the use of personal tutors for those of financial means and/or aptitude (Lunsford & Ruszkiewicz, 2000, p. 467; Brulles, Saunders & Cohn, 2010, p. 329) focusing on the child's strengths.

Differentiation consists of the efforts of teachers to respond to variance among learners in the classroom. Whenever a teacher reaches out to an individual or small group to vary his or her teaching in order to create the best learning experience possible, that teacher is differentiating instruction. (Tomlinson, 2001, p. 1)

The use of a variety of questioning levels has been referred to as differentiation within the general education classroom. Westburg, Archambault, Dobyns, and Slavin found that in general education classes with gifted students the majority of questions, eighty-one percent, were at the knowledge level and higher order questioning was not being used with any regular frequency (1993, p. 46).

Questioning based on higher order thinking has been a classroom practice for many years though in studies, it has been used less than ten percent of the time (Mendes, 2010, p. 134). Questioning students to encourage higher level thinking ignites considerations of wait time. If a question is delivered to a student at the correct cognitive level, the student should require some wait time to completely

answer the question. This will work to increase a student's self-regulation as they will learn to persist and not immediately have all the answers (Manning, Glasner, & Smoth, 2011, p. 2). Marzano states that teachers should prepare questions at four different levels, Level 1-details; Level 2- characteristics; Level 3-elaborations; Level 4-evidence (2013, p. 76-77). Teachers may be more familiar with Bloom's Taxonomy (Bloom, Engelhart, Furst, Hill, and Krathwohl, 1956) or the Revised Bloom's Taxonomy (RBT) (Anderson and Krathwohl, 2001, 68-69). The goal is to ask students questions from the more rigorous levels, which Westberg, Archambault, Dobyns, and Salvin found not to be a common practice (1993, p. 46; Mendes, 2010, p. 12; Blankstein, Cole, & Houston, 2007, p. 102-107).

Despite the evidence that differentiation is beneficial to students, a survey conducted across the United States found teachers in general education classes only differentiate in one fashion or another sixteen percent of the time. The study found there are some types of differentiation that occur with greater frequency, an example being that advanced content happens more regularly than other types of differentiation. The authors describe advanced content as, "materials normally used at the next grade level or materials at an advanced level" (Westberg, et al, 1993, p. 28). Lack of academic instruction and assignments at an appropriate learning level lead to boredom. Differentiation can be effectively used beginning in elementary school (Tomlinson, 2001, p. 1). If students are not taught at their ability level to combat boredom, underachievement, and

disengagement the result is underachievement and disengagement which begins a downward spiral effect on the student's education (see Table 2).

Table 2

Percent of Activities in Which Gifted Students Received Differentiated Experiences

Types of differentiation	Reading	Math	Social studies	Language	Science	All subjects
No differentiation	80	88	7	87	92	84
Advanced content	9	3	11	2	0	5
Advanced process	7	2	4	0	1	3
Advanced project	1	1	0	1	3	1
Independent study: Assigned topic	1	1	0	2	3	1
Independent Study: Self-selected topic	1	2	0	0	0	1
Other differentiation	3	4	8	8	2	5

Westberg, K. L., Archambault, F. X., Jr., Dobyns, S. M., & Salvin, T. (1993). *An observational study of instructional and curricular practices used with gifted and talented students in regular classrooms* (Research Monograph 93104). Storrs: University of Connecticut, National Research Center on the Gifted and Talented.

With the recognition that differentiation is beneficial to atypical learners, both those above and below grade level expectations, it is difficult to understand why it is taking place so infrequently. Failure to differentiate is affecting today's students. Mendoza surveyed teachers of gifted students and found 50% felt gifted education was going to continue to decline (2006, p. 6).

There has been finger pointing as to why gifted students are not receiving curriculum consistent with their abilities (SENG Gifted, 2011, p. 1), however

blame is not beneficial to the students. There is a need for educators, administrators, and policy makers to work together to avail the education of gifted students (Brown & Abernathy, 2009, p. 56; Van Tassel-Baska, Feng, Brown, Bracken, Stambaugh, French, McGowan, Worley, Quek, & Bai, 2008, p. 297). Pfeiffer wrote of a need to put research into practice (2003, p. 168; VanTassel-Baska et al., 2008, p.307). Brown and Abernathy write that, for consistency, a gifted program should include identification, services, professional development, and teacher preparation (2009, p. 53). There have been studies on the unique social and emotional needs of gifted students (Peterson, 2009, p. 281, Daniels, 2008, p. 6; Daniels & Peters, 2013, p. 27-28) which indicate aside from the gifted students' academic needs, there are additional considerations. These unique social/emotional needs or excitabilities are difficult for teachers to understand if they have not been properly trained. As an example, a gifted student's overexcitability may be mistaken for tendencies associated with Attention Deficit Hyperactivity Disorder (California Association for the Gifted, 2007, p. 2). This would be an indication to the benefit of teacher preparation classes as a way to address the needs of the whole child (Peterson, 2009, p. 282, Bangel, Moon, & Capobianco, 2010, p. 253). Failure to meet these identified needs of gifted students can lead to misunderstanding and underachievement (Smyth, Hattam, Cannon, Edwards, Wilson, & Wurst, 2004, p. 167).

Underachievement

A survey conducted by Pfeiffer of experts in the field of gifted education revealed a need to address the problem of academic underachievement of gifted students (2003, p. 165). Renzulli notes a problem has been poor implementation and incomplete programs (2011, p. 305). Reis and McCoach, in a study of underachieving gifted students, note a need to consider differences among various cultures (2000, p. 162).

A large contributor to the dropout rate is lack of engagement in education; students are becoming bored (Bradford, 2005, p. 29; Zablowksi, 2010, p. 142).). “It is now widely accepted that dropout is a process of disengagement and withdrawal that occurs over years” (Landis, & Reschly, 2013, p. 224; Finn, 1989, p. 118). A response to a lack of student engagement may provide early intervention and possibly prevent any further disconnection within the school environment (Appleton, et al., 2008, p. 373).

Underachievement is a term used to describe students that fail to demonstrate academic performance consistent with the student’s potential (Landis & Reschly, 2013, p. 222). The issue of gifted underachievement has been studied and attempts made to develop an instrument and work toward reversing said underachievement by McCoach and Siegle (2005, p. 147). Others have attempted to look at the underlying cause of underachievement (SENG Gifted, 2011, p. 2; Landis & Reschly, 2013, p. 243). The link has also been made between a lack of engagement and underachievement. Associations have also been developed between teacher-student relationships and engagement

(Conner & Pope, 2013, p. 1428). Figg concludes after his study of underachieving gifted learners that disengagement results in underachievement. However, Figg continues to note as students get older and rotate classes or teachers there are also students that engage in one academic area or with one teacher yet not others. He terms these students, “selective consumers” (2012, p. 183). Landis and Reschly acknowledge a difficulty with gifted underachievement is that a gifted student may maintain a high to average grade point average (GPA) yet be disengaging academically (2013, p. 222). Zyngier cautions, “Engagement is not a predictor of academic success—academic achievement does not necessarily equal engagement” (2006, p. 1770). Despite engagement in one or more areas, a student still may not be being adequately challenged or interested in their academics (Westberg, et al., 1993, p. 2). While Reis and Boeve found gifted students had to learn how to respond once a teacher provided them with an academic challenge (2009, p. 236). The lack of academic challenge for gifted students has far reaching implications, for the students and the innovation of the country (Stephens, 2011, p. 316; Brown & Abernathy, 2009, p. 57; Landis & Reschly, 2013, p. 242; Goldspink & Foster, 2013, p. 292).

Student Engagement

Student engagement is a construct which is difficult to define, though many administrators look for it upon observations of teachers, the general consensus is that one knows it when they see it (Center for Comprehensive

School Reform and Improvement, 2012, p. 1; Taylor, 2012, p. 1). Table 3 includes some definitions of student engagement.

Table 3

Definitions of Student Engagement

Source	Definition
Schlechy, (1994), Increasing Student Engagement. Missouri Leadership Academy.	Students who are engaged exhibit three characteristics: (a) they are attracted to their work, (b) they persist in their work despite challenges and obstacles, and (c) they take visible delight in accomplishing their work.
Conner, & Pope, (2013) Not just robo-students: Why full engagement matters and how schools can promote it. Journal of Youth and Adolescence	Engagement is a multi-dimensional construct, with affective (experiencing interest and enjoyment), behavioral (working hard and exerting mental effort) and cognitive components (valuing and caring about the work).
Kaiser, Retelsdorf, Sudkamp, & Moller, (2013). Achievement and engagement: How student characteristics influence teacher judgment.	Behavioral engagement –involvement in learning and academic tasks. Engaged behavior includes: effort, persistence, concentration, attention, asking questions, and contributing to class discussion.
Landis, & Reschly (2013) Reexamining gifted underachievement and dropout through the lens of student engagement	Engagement is a multidimensional construct that comprised some aspects of emotion, behavior, and cognition and is influenced by contexts such as home, school, and peers.
Lawson, & Lawson (2013) New Conceptual Framework for Student Engagement Research, Policy, and Practice	We present it [student engagement] as the conceptual glue that connects student agency (including students' prior knowledge, experience, and interest at school, home and in the community) and its ecological influences (peers, family, community) to the organize structures and cultures of school.

These definitions acknowledge that engagement is more than a student sitting at their desk doing what they should do. Students also should have an interest in completing a provided task or assignment. Strong, Silver, and Robinson note the completeness of Schlecty's work as it considers various states noting there are five types of engagement including: engagement – work has meaning to the student; strategic compliance - student associates work with extrinsic results that are of value to the student; ritual compliance – student expends whatever effort is necessary to avoid negative consequences; retreatism – student is disengaged from the task and expends little to no energy to comply; rebellion – student refuses to do the assigned task (1995, p. 8). A cautionary note that the various types of engagement are not to be viewed in solitude as one facet of engagement effects the others. Cognitive engagement has been shown to effect behavioral engagement (Landis & Reschly, 2013, p. 236). In short, students who are engaged find their work, “stimulating to their curiosity, expresses their creativity, fosters positive relationships” (Strong, Silver, & Robinson, 1995, p. 1). The struggle in defining student engagement points to the continued division between policy makers, teachers, and the public (Zyngier, 2006, p. 1174).

For the purposes of this study the term student engagement is taken from the Kaiser, Retelsdorf, Sudkamp, and Moller definition of 2013 as listed in Table 3.

Student engagement is a key factor with regard to students' academic success or failure (Yazzie-Mintz, 2007, p. 5; Taylor, 2012, p. 1). Behavioral engagement in a classroom looks like students who are on the right page, working on given assignments. It is in contrast to many classrooms where students may be in various stages of task completion, while some have not started, others are finished and may be throwing things at other students, doodling, or silent reading. Students that are engaged academically are more successful academically than students who lack engagement. The lack of engagement or boredom while in class is the reason most often cited as the reason for students to drop out of school, this is true for gifted, general education, and special education students. (Martin & Dowson, 2009, p. 329; Reis & McCoach, 2000, p. 166). Studies conducted on the student engagement of older students defined each component of engagement (see Table 4).

Though the study which contributed to the findings in this chart was based on high school students, there is consistency with students in elementary school. It is, in fact, elementary school where many students first note their boredom in school (Reis & McCoach, 2000, p. 156; Conner & Pope, 2013, p. 1427). Reis discusses the potential to turn around underachievement for students in elementary school to eliminate this issue as children progress through school (2013).

Table 4

Three Components of Student Engagement

Component	In class looks like
Cognitive: Intellectual, Academic	Student focused on academic lesson. Student puts forth appropriate effort.
Behavioral: Social, Participatory	Students' action and participation within the school outside of instructional time, including nonacademic school-based activities, and interactions with other students. Focus on student actions, interactions, and participation within the school community.
Emotional	Student takes pride in their school and their role within the school. They are a vital part of a class and school.

Yazzie-Mintz, E. (2009). *Engaging the voices of students: A report on the 2007 & 2008 High School Survey of Student Engagement*. Arlington, VA: National Association for College Admission Counseling.

Recent dialogue among educators has included the skills needed for the 21st century (Newman, 2008, p. 34). The skills required for current students to be successful and adequately prepared for their futures go far beyond the reading, writing, and arithmetic instruction presented in classes. Realizing there has been an academic deficit, many states within the United States have adopted the new Common Core State Standards (CCSS). These standards focus on thinking skills as well as academic skills. Even with the CCSS and a change in pedagogy for teachers, there is a need to address the academic needs of gifted students (Bangel, Moon, & Capobianco, 2010, p. 209). There is hope the new educational concepts, CCSS and Race to the Top, will foster more student driven activities, expression, and instruction allowing for a higher level of engagement, however there is a certain amount of pessimism (Lawson & Lawson, 2013, p. 446).

The new Common Core State Standards, if being addressed correctly, require the traditional class of the 1950's to disappear. The rows of compliant students working quietly in complete solitude for the entire day should be replaced. The students should be sharing their ideas and gleanings from others. The CCSS have addressed some of the needs of gifted students, which is partially consistent with Zabloski's findings, however the need to have a curriculum and instruction at a student's designated level remains. Students that are not engaged in their education are at an increased risk of dropout (Bradford, 2005, p. 29). A study of general education students from high achieving schools, conducted by Conner and Pope found students were engaged behaviorally (working hard and exerting mental effort) eighty-four percent of the time, affectively (experiencing interest and enjoyment) 17% of the time, and 42% of the time cognitively (valuing and caring about work) engaged (2013, p. 1438). A problem exists that not all students go to high achieving schools so these findings cannot be generalized. Despite these findings Zyngier notes, it is the students who can discuss their engagement as well as the limits they find within the school system (2006, p. 1773) that display an interest in their education.

Effects of Student Engagement on Learning

Within class, gifted children are often bored and even disrupting. Burney notes, gifted students are often cited as underachieving or not meeting their potential (2008, p. 133). An echo of Terman when in 1916 he wrote, "Even genius languishes when kept over-long at tasks that are too easy" (p. 5).

“Unfortunately the pattern of underachievement is difficult to reverse and can persist into adulthood without intervention” (Reis & Morales-Taylor, 2010, p. 33). The benefits of education are negligible if the information presented is instructed at a significantly lower level than the student’s ability (Reis & Boeve, 2009, p. 207; Stephens, 2011, p. 312).

Lack of engagement has been noted in early elementary school with students displaying difficulties with, “attendance, academic performance, behavior, and attachment to school” (Landis & Reschly, 2013, p. 224). Landis and Reschly continue that a lack of academic engagement is found among underachievers (2013, p. 238). There is plenty of blame to pass around with regard to students who are disengaged, however that does not resolve the issues (Zyngier, 2006, p. 1174).

Building and Strengthening Student Engagement

One method to build student engagement is to provide assignments consistent with one’s ability. All gifted students are not alike and thus differentiation works at each student’s level to assure all students have an academic challenge (Kaplan, 2009, p. 258; Burney, 2008, p. 135). Differentiation has been defined as, “the efforts of teachers to respond to variance among learners in the classroom” (Tomlinson, 2001, p. 1). A study by Van Tassel-Baska et al found the importance of the teacher’s behavior in student achievement, critical thinking, and metacognition (2008, p. 298).

Another influence on student engagement is finding methods to build interests for students. There are several schools which have adopted a Schoolwide Enrichment Model (SEM). One study looked at such a model and found there was significance in the design of the model as well as the integration of said instruction into one's actual learning, noting it should not just be an activity time but a designated time to integrate learning and activity in an attempt to find new interests for students (Aljughaiman and Ayoub, 2012, p. 168).

Experts note a need to develop self-regulation in students who have withdrawn from their education, gifted and nongifted students. Self-regulation is one's ability to control "behavior by self-monitoring desires as well as the desirable behavior" (Psychology, 2013). An inability to self-regulate can lead to an inability to extend effort with challenging assignments, difficulty focusing for extended periods, and to avoid social pressures specifically related to aggression (Reis & Morales-Taylor, 2010, p. 33; Reis & McCoach, 2000, p. 160). A need to develop decision-making skills as well as conflict resolution has been established (Huss, 2006, p. 22). Reis and McCoach present a question in a study of gifted underachievement, "Do schools that differentiate instruction for high-ability students have fewer incidences of underachievement?" (2000, p. 166). "Engagement may prove to be an essential construct for understanding and preventing dropout among gifted students" (Landis & Reschly, 2013, p. 226). Engagement is believed to be a better predictor of student underachievement for gifted students (Landis & Reschly, 2013, p. 226) than other measures. Studies to

date have not measured time on task as part of assessing student engagement (Landis & Reschly, 2013, p. 230). Behavioral engagement, particularly school attendance, and behavioral issues remains a top predictor of underachievement and eventual dropout (Appleton et al., 2008, p. 382; Finn, 1989, p. 118). A student's poor attendance then effects their cognitive engagement as the lessons become more difficult due to missing academic information. These patterns begin in early elementary school and continue through a student's formal education (Landis & Reschly, 2013, p. 233).

Student engagement, as well as academic ability, is malleable and can be improved with enhancements in instruction including teacher pedagogy, assignments, expectations, and other interventions (Lawson & Lawson, 2013, p. 435; Marks, 2000, p. 175; Fredricks, Blumenfield, & Paris, 2004, p. 61; VanTassel et al, 2008, p. 298). As the appropriate level of challenge is presented, boredom and disengagement decrease. The learning environment plays a part in student engagement, student engagement being largely shaped by the early experiences each student has in elementary school (Lawson & Lawson, 2013, p. 441-442). As an example, Lawson and Lawson write, classrooms which support autonomy and focus on goal mastery have higher levels of student engagement when compared to rigid and controlling classroom environments (2013, p. 453). Other suggestions to increase student engagement include: developing interactive and relevant learning activities within the classroom, teachers being supportive and encouraging, encouraging parental

involvement in their student's academic life, assuring the school environment is safe for all students, increasing energy within the class, and stimulating thought with missing information (Center for Comprehensive School Reform and Improvement, 2012, 1-6; Finn, 1989, p. 122; Marzano, 2013, p. 76). The essential direction is to understand how classroom environments can either generate or suppress student engagement, and as such strive to improve student engagement within the classroom for all students including gifted students (Strong, Silver, & Robinson 1995, p. 11). Student engagement is essential to look at as engaged students do better in school, dropout less frequently, and behave better while they are in school (Appleton et al., 2008, p. 383; Fredricks, Blumenfield, & Paris, 2004, p. 71).

Theoretical Underpinnings

We know that students are reporting boredom daily while at school. Boredom while working on academic tasks is resulting in students who are disengaged from their education. This disengagement results in underachieving students or even dropouts. Students are experiencing this phenomenon despite their intellectual abilities (Reis & Morales-Taylor, 2010, p. 33, Zablowksi, 2010, p. 141), or their developmental stages, though as previously stated the students in lower elementary are engaged at a higher rate, the rate of engagement decline begins in upper elementary and continues through the academic career of the student. Early difficulties with engagement can affect a young child for many years (Kaiser, Retelsdorf, Sudkamp, & Moller, 2013, p. 75). These findings are

consistent with Erikson's Stages of Psychosocial Development. If students are focused in their elementary years, they complete academic tasks and thus experience acceptance from their teachers and peers. These years of elementary school, Erikson noted, are critical for a child's development and self-confidence. If one fails to receive accolades in elementary school, if a student feels they cannot fulfill the expectations of others, or if they are ridiculed or feel their efforts result in punishment, the student begins to develop feelings of inferiority (Lawson & Lawson, 2013, p. 442).

This study is based on the theories that differentiation is beneficial to learning, that engagement is needed for true learning, and that disengagement begins in upper elementary school (Connor and Pope, 2013, p. 1427). In a conference, one speaker stated that differentiation has not been proven to be beneficial to student learning; this drew curiosity. Alongside this is the assumption that disengagement begins in upper elementary school or about the fifth grade. However, little study has been done on young children; most engagement studies are based on high school to college age individuals retrospectively looking at the education.

Conclusion

All students need to learn. The employment of differentiated strategies can help not only the gifted students within a general education class but also the general education students and the special education students. Differentiation can increase interest, participation, and engagement within the

class setting. Tomlinson writes, “There is no one ‘right way’ to create an effectively differentiated classroom (1999, p. 3). However, the purpose is to see the students as individuals with a variety of abilities and address their academic needs appropriately either as individuals or as groups. Students learn best when they have an appropriate amount of challenge in their assignments and instruction. To facilitate learning, students need to be engaged. They need to feel challenged by their academic work, not so difficult it is unachievable, but not so easy it requires little thought. “Engagement has been identified as a necessary pre-condition for deep learning” (Goldspink & Foster, 2013, p. 292). Dai, Swanson, and Cheng state, the field of gifted research needs to focus on “use-inspired” studies (2011, p. 137). As such, this study worked within established general education classrooms to use a practical setting. Kaiser et al note even young children recognize their engagement or disengagement and can appropriately answer questions accurately as such (2013, p. 82). This is essential as disengagement, it is thought, begins in about the fifth grade. This study sought the input of gifted students, some of which may be experiencing various degrees of engagement or disengagement regularly. “Gifted learners and indeed all learners’ educational futures depend on the choices teachers make daily” (Brown & Abernathy, 2009, p. 57).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

Introduction

This study was a qualitative study as it was an observational case study. Measures were used to triangulate the data. Classes were observed which have both students identified as gifted and talented as well as general education students. During these observations notes were taken, an observational instrument was used, and the class was recorded including audio and video recordings. These recordings were then reviewed to assure the observational data was complete and no indications of engagement or disengagement were missed or overlooked during the observations.

Participants and Setting

The participants in this investigation were a sample of convenience. The participants were students attending a K–6 grade school in Southern California. The criteria for inclusion in the study included: an elementary school which contained a fifth-grade general education class which was the primary education class for a cluster of gifted students. At the school in which the study was conducted, the two fifth-grade classrooms have 4-6 students identified as gifted and talented though the students mix to rotate based on whole class or academic ability groups. The school selected is in the middle of the socioeconomic scale. The fifth grade has an English Language Learner (ELL)

population of 0-1 students in each class. At the selected school, the investigator worked with two teacher (classroom) participant volunteers.

The participant classes have a gifted cluster of fifth-grade students as well as nongifted students within the class. When the classes rotate based on ability, there are larger numbers of gifted students working alongside high achieving students. The classes have about 27-30 nongifted students in each class.

This elementary school has 510 students, 43 percent Caucasian, 46 percent Hispanic, American Native, 4 percent African-American, 4 percent Asian, 3 percent other ethnicities. This elementary school has a population of 20 students or 4% English Language Learners predominately Spanish speaking. Seventy to eighty percent of the students score in the proficient or advanced range of the California Standards Test for the last 3 years of assessment. The school accountability report notes 36 percent of the students are economically disadvantaged. The school shows <1% suspensions for the year. The 2013 Academic Performance Indicator was 856. School AB has 3% or 36 gifted and talented students, 9 of which are in fifth grade. However only fourth- to sixth-grade students are assessed for G.A.T.E. inclusion, approximately 15% of the fourth- to sixth-grade student population are identified as gifted students.

After first speaking with and obtaining permission to conduct the study from the Associate Superintendent of Pupil Services and the Superintendent, the principal volunteered to have the study conducted at her site and completed a letter of support. The teachers working at the selected school at the fifth-grade

level were then contacted through personal contact and followed up via email. The selected teachers voluntarily allowed the observations, recordings and completion of surveys in their classes.

Participation Permission Procedures

The volunteer teachers signed a Teacher Participant Form indicating voluntary participation in the study, approval for observations and recording, both audio and video, within their classrooms, as well as the authorization to provide time to allow students to complete surveys as well as post observation teacher interviews. The district provided all parents a photo/video permission each year and all students in each class have it on file. However, for the purpose of this study, the students' parents were asked to complete an additional form allowing for participation in this study including video and audio recordings. Teacher volunteers were informed participation in this study would not be used for any evaluation process nor would the information and/or data be presented for such. The investigator met with the volunteer teacher participants to discuss responses and potential answers to questions pertaining to possible parent questions. Once the teacher participants/classrooms were established, the teacher sent home to the families of all students in the selected classes an informational flier, provided to teacher after the teacher signed up as a participant/volunteer class (Appendix G). A parent information meeting was held for questions and answers. Based on the students in the class and language needs of their parent or guardian, a speaking translator was available at the meeting for parent support as warranted

by Home Language Surveys. After the parent information meeting, all of the parents of the students assigned to the participant classes were asked to sign the Participant Permission Form/Informed Consents; English/Spanish copies were provided. All students in the class were asked to sign a consent/permission form as the investigator was in class with gifted students as well as nongifted students. The number of gifted student participants was ten students. Classes were observed on four occasions. Parents and student participants were provided California State University, San Bernardino email for contact purposes.

Before the study began, students were provided an introduction/purpose as well as a question and answer time. The recording device was situated to acclimate the students to the camera a week before the first observation. Before the observation session, a statement of assent (Appendix H) was read which assured students who wished not to participate an alternate learning environment with a coteacher with whom the student(s) regularly rotated. The participant students were in their regular general education class, with the same teacher they have daily, utilizing the same schedule as a typical day, reducing the possibility of latent variables. The class size was 34 students, with three students/families in one class and five in another class opting not to participate. One other student opted not to participate after the assent was read. Of the 34 students in class, approximately 5 of which are expected to be previously identified gifted students in each class, the precise number depended on the classroom and student grouping for that particular observation.

Limitations and Disclosures

The latent variables identified and considered included the use of the camera for recording the observations. The benefits of audio and video recordings in observational studies has been documented (Haidet, K. K., Tate, J., Divirgilio-Thomas, D., Kolanowski, A., & Happ, M. B., 2009, p. 470) cameras still tend to make students anxious. To account for this, the camera was placed in the class a week before the first observation. Another latent variable would be the presence of the investigator in the class. To address the effects of this, this observer walked through the class several times in the week preceding the first observation. Finally, there is the variable that the classroom teacher would have altered their instruction. To account for this, there is a question on the Student Engagement Scale and in the post observation teacher interviews to receive student and teacher input as to whether they felt there were any changes with regard to this latent variable.

Methods

There were four observations between the two classes, one when a grade level lesson and assignment was presented with no differentiation or accounting for the gifted students' abilities, three when the teacher planned differentiated lessons of one type or another and assignments. Each observation visit was video and audio recorded while the observer was completing the iPad version of the Behavior Observation of Students in Schools (BOSS) and taking notes. At a later time the recordings were reviewed by the investigator to assure data

consistency with BOSS engagement instrument. At the end of each session, the students were asked to complete a five point scale, Student Engagement Scale, adapted from Academic Skills Problems Student Interview Form (Shapiro, 2011, p. 34) and Measuring Student Engagement in Upper Elementary through High School (Dornbusch & Steinberg, 2003).

The BOSS observational instrument had the observer input specific information prior to beginning the observation including: student name (pseudonyms were used); school (for this section the teacher's first name was used); grade; task (this was noted as the learning task, for example Math-geometry at grade level); setting (all observations were whole class not small group, though one was with a gifted and high achieving group of students); duration (total time of this observation); and interval length (amount of time before BOSS switches to second student). During each interval, it was noted whether a student was Actively Engaged in Task (AET), Passively Engaged in Task (PET), Off-Task Motor (OTM), Off-Task Visual (OTV), and Off-Task Passive (OTP) as well as Teacher-Directed Instruction (TDI). Once the observation was complete and students completed the Student Engagement Scale I, at a convenient time that day, the teacher who taught the observed lesson was interviewed (Appendix F) to verify if any atypical issues (latent variables) or concerns occurred. These results were then codified and evaluated.

With each observation, the investigator specifically observed for behaviors that either demonstrated engagement (an example would be a student facing the

teacher, possibly taking notes during instruction) or demonstrated a lack of engagement (an example would be poking another student or taking the lead out of a pencil while the teacher was teaching). The article, A Students' Engagement While in Schools, by Landis and Reschly revealed a lack of engagement leads to boredom and behavioral concerns in class (2013, p. 224).

Instrument

This study used Student Engagement Scale (Appendix C) which has been adapted from Dornbusch and Steinberg's School Engagement Questionnaire (SEQ) (1990). This study also conducted classroom observations. The Student Engagement Scale was created based on the Student Engagement Questioner (SEQ) as the SEQ was written for high school students and some questions were inappropriately worded for elementary school students. The Student Engagement Scale also contained short response questions adapted from the Academic Skills Problems Student Interview Form (Shapiro, 2011).

During the classroom observations, this investigator used a student engagement instrument iPad version of the Behavioral Observation of Students in Schools, (BOSS) (Shapiro, 2011). The BOSS scheduled through regularly paced intervals every 15 seconds. Each 15 second period the observer was looking for and noting: Active engagement in task (AET), Passively engaged in task (PET), Off task motor ((OFT-M), Off task verbal (OST-V), Off task passive (OFT-P), and Teacher directed instruction (TDI).

Data Collection

The student surveys were quantified and the short response portion evaluated for consistent themes using Atlas TI and Excel. The BOSS iPad version quantified the observations based on observer input. These results were evaluated statistically to look for averages, outliers, and other relevant results.

The observations were video and audio recorded to assure a complete look at the behaviors presented in class, as a fifth-grade class is very busy making it easy to miss behaviors indicating either engagement or a lack thereof. The recordings were viewed and selected portions were transcribed. Notes were taken during the class session(s) using BOSS iPad version and hand notes as appropriate. After class observations, the recording(s) were reviewed, and compared to printed versions the observational notes and the BOSS engagement survey completed by investigator to look for consistent themes.

Video/audio recording facilitated detailed notes and observation of behaviors indicating engagement or lack thereof. Furthermore, the recordings provided for triangulation of the data, assuring the accuracy of in class observations eliminating any possible bias. The actions that are difficult to observe in a group are easily identified via recorded data include gaze and gesture. Some engagement or nonengagement behaviors displayed are shown in Table 5.

Table 5

Evidence of Engagement or Nonengagement Behaviors

Evidence of engagement	Evidence of nonengagement
Facing instruction (teacher or whiteboard)	Not facing instruction
Book open to correct page	Book not open to correct page or not out
Student following along and or note taking	Student not following along
Student asking and/or answering questions on topic	Students not asking and/or answering appropriate questions
	Student interacting with other student(s) physically
	Student interacting with other student(s) verbally

Data Analysis

The BOSS data was analyzed for consistent themes or indications of engagement. The Student Engagement Scale was quantified to find consistencies, outliers, and averages. The short response portion of the surveys were evaluated via Atlas TI and Excel again looking for consistencies, outliers, or other indicators of engagement or disengagement. The observation notes were added to upon review of the recording, to assure an accurate view during the observation. The notes were codified looking for similar behaviors and/or comments; this investigator looked for commonalities and themes. The teacher interviews were also codified and reviewed for common themes.

CHAPTER FOUR

RESULTS

Introduction

The focus on the research questions must be in the forefront of this chapter. The purpose of this study was to evaluate the behavioral engagement of the gifted students in various academic situations. The observations focused on the differing types of groupings of students as well as the assignments and expectations within the lessons. Chapter four evaluates all of the data obtained through the observations, student engagement surveys, and teacher interviews.

The research was conducted in an elementary school district in Southern California. The foundation of this study works on the belief that differentiation is beneficial to educating students, that is to consider a students' needs and assure the assignment they are working on.

Once the district was selected and authorization was given by the associate superintendent a principal volunteered to have the study conducted at her school. The fifth-grade teachers were contacted in person, then followed up via email. Both of the teachers at the fifth-grade level volunteered to participate in the study. The teachers then sent out an informational flier to the parents, a parent meeting was held and parents were asked to sign a consent/participation form. Of the 68 students in the class, 60 parents consented to have their children participate in the study. All students present in the class were asked to sign the consent as they would be present in the class during the observations and

audio/video recordings. Of these students 10 were previously identified as gifted and talented students, these students were the focus of this study. Students were observed and recorded in their regular class with their regular teachers. Students were then asked to complete a Student Engagement Survey which had some 5-point scale questions and some open response questions. Following the observations, the investigator and teachers had a brief interview. Following the interviews, the recordings were reviewed to assure the observational notes taken during the observation were complete.

The demographics of the students are listed in Table 6 and include a 60 – 40 ratio of males and females. The students included six white students, three Hispanic students, and one African American student. Two of the students are reported as low socioeconomic status while eight were not impacted socioeconomically.

Table 6

Participant Demographics

Characteristic	<i>n</i>
Gender	
Male	6
Female	4
Race/ethnicity	
African American	1
Hispanic	3
White	6
Socioeconomic status	
Socioeconomically disadvantaged	2
Nonsocioeconomically disadvantaged	8

Note. *N* = 10.

Data Analysis and Examples

This observational study set a goal, to see the students in as natural an educational environment as possible. The students were exposed to the camera a full week ahead of the first observation so the students were not focused on the recording device during the observations. The students were in their routine school environment with the teachers they regularly have, which allowed for a more natural view of the academic lives of these students.

During the in-class observations, notes were taken in intervals of 15 seconds for a period of half an hour. The focus of the notes was on behaviors demonstrating academic engagement or disengagement. Students were in various academic situations including whole class, G.A.T.E. – High Achiever groupings. These being groups in which the students regularly rotate.

Observational notes provided a beneficial look into the fifth-grade gifted students' daily life. The gifted students were observed to have many consistent behaviors demonstrating various stages of engagement and disengagement.

The first 30-minute observation was in a whole class environment. Present during the lesson were students previously identified as gifted as well as nongifted students. This was a Math lesson in which the students had to calculate, draw, and explain how items with given dimensions would fit into a bookshelf with specific dimensions. There was no differentiation with presentation, assignment, instruction, or grouping. Examples of actions observed indicating stages of engagement are included below.

Engaged

- Gifted students appear to have a consistent work form that blocks work from others view. One student Frank turning his back completely on the student who is sitting right next to him.
- Nongifted tries to draw Frank into conversation; Frank does not participate in off task behavior.
- Bri continues to work from start of time to end of time.
- Carl is working diligently on the project for the majority of the time.

Disengaged but Compliant

- G.A.T.E. student Frank working while laying head down on table.
- Carl appears to be finished and does not touch his paper or pencil for a few minutes – laying head on table then gets started on assignment again.

Disengaged

- Gifted student tapping his head with his pencil.
- Gifted students (Carl and Frank) at 2 different tables off-topic talking to neighbors – they draw in a nongifted student into their off task behaviors.
- Carl practices newly learned dance moves as a part in upcoming variety show, practices the move several times.
- Silent reading, 3 of 4 gifted students are not participating.

Observation 2 was another Math lesson which was observed for 30 minutes. The learning objective of this lesson was for students to create a 3 dimensional town using various geometric figures. The students had to consider the needed components within a town such as a school, hospital, library, and store. In this lesson the students were grouped whole class. This assignment was the same for all students, gifted and nongifted alike. There was differentiation in the expectation of the students' final project.

Engaged

- Gifted students busily working on project.
- Creating 3D building holds interest of students.

Disengaged but Compliant

- Garrett complains that he has to look up the geometry definitions.

Disengaged

- Luke puts off the start of the project, spending time fiddling with pencil.

The third observation was differentiated in grouping and was observed for half an hour. The only students present were gifted or high achieving students. The lesson was using an adopted textbook with literature selections at the fifth-grade reading level. This reading level is below the majority of the students in this groups reading ability. Following the reading, the students participated in a vocabulary study as well as some short response questions provided with the textbook, again at the fifth-grade level. There was no modification of the assignment.

Engaged

- Mark follows along intently through the entire story as it is read aloud.

Disengaged but Compliant

- Garrett then begins to play with the dried hair gel in his hair, Garrett then corrects the pronunciation of a nongifted student. He continues to play with hair gel

Disengaged

- Silent reading, 3 of 4 G.A.T.E. students are not participating.
- Luke is bored and yawns.
- Garrett and non-G.A.T.E. student chat, then Garrett yawns.
- Vic appears to mimic his nongifted neighbor rocking back and forth to maintain focus.

The fourth 30-minute observation was in a whole class; however, the students were grouped within the class by ability. The students were working on the same project overall though the gifted students were working to create the questions to challenge others within their group, as opposed to the nongifted students who were answering already constructed items. The gifted students had to write a math word problem and provide two answers, one correct and one a distractor. This prompted the gifted students to consider what an appropriate distractor answer would be as well as creating a difficult question to challenge classmates.

Engaged

- Some diligently work for the majority of the class on their assignment.
- Nongifted peer throws something small at Carl and he continues to work diligently.
- Frank continues to talk to his neighbor and work on the assignment intermittently asking Luke to check certain parts of his assignment then continuing.
- When Carl is finished with his assignment, he shows it to the teacher then to the students at the highest ability table apparently seeking approval.

Disengaged but Compliant

- Students work and talk, then work then talk.
- Frank sings a song to himself then gets back to work.
- Frank gets serious about the completion of his assignment and works on the assignment a higher percentage of the time. He then tells the teacher another student at the table is talking – she stands by table and Frank works diligently.

Disengaged

- Initially gifted student Frank is distracted, not giving any time to the project.
- Teacher has to come to table with several gifted students to get them to focus.

- Student occasionally playing with his pencil or other distracted motions.
- Carl then uses his time to straighten items on the table then talks to others near him.

During the in class observations the IPad BOSS version of a student engagement instrument was used. The summary of the BOSS results of this student engagement instrument can be found in Table 7. The BOSS application focuses on students displaying activities which can be interpreted as actively or passively engaged as well as typical displays of disengagement: physically, verbally, or motor wise disengaged. When the active and passive engagement results were added together the results of the BOSS pointed to a higher level of engagement based on differentiation within the class. Gifted students were most engaged in the fourth observation, creating math problems. They were least engaged in the first observation which was the class that had no differentiation; a math lesson on fitting items to shelves. These lessons were the same teacher, same academic topic, and the same whole class grouping, though the students in the fourth observation were sitting according to their abilities. However, the amount of engagement was significantly different.

If only considering the active engagement of students, the fourth observation, creating math problems, held the highest degree of active engagement while the third observation, gate-high achiever group which was

Table 7

BOSS Observation Results Summary Table

Observation	% of students observed in behavior
BOSS Observation Instrument – Observation 1 (No differentiation)	
Actively engaged in task	23.26
Passively engaged in task	12.50
Off task motor	20.14
Off task verbal	5.89
Off task physical	6.94
BOSS Observational Instrument – Observation 2 (Differentiated in expectation)	
Actively engaged in task	42.07
Passively engaged in task	16.23
Off task motor	3.13
Off task verbal	0
BOSS Observational Instrument – Observation 3 (Differentiated in student grouping)	
Actively engaged in task	13.88
Passively engaged in task	43.06
Off task motor	0.35
Off task verbal	0.69
Off task physical	0
BOSS Observational Instrument – Observation 4 (Differentiated in grouping and assignment)	
Actively engaged in task	50.35
Passively engaged in task	5.90
Off task motor	0
Off task verbal	9.72
Off task physical	6.72
BOSS Observational Instrument – Overall	
Actively engaged in task	32.41
Passively engaged in task	19.42
Off task motor	6.34
Off task verbal	4.08
Off task physical	3.73

reading and responding to grade level text held the lowest amount of active engagement.

Following each observation, students were asked to complete a 5 point scale adapted from Measuring Student Engagement in Upper Elementary through High School (Dornbusch & Steinberg, 2003) and Academic Skills Problems Student Interview Form (Shapiro, 2011) as a means of providing insight as to the participating students' perception of their engagement (Appendix C). The results of these scales are found in Appendix K. A summary of those results is found in Table 8.

There were some outliers such as question 4 on the third observation, one student answered a 2. If we remove this low response the average would be 4.6 indicating overall there was a high degree of interest in this lesson. Also the responses were not always consistent with the observed data. As an example the BOSS scale revealed the fourth observation held the highest degree of engagement for the students, however in the student responses on the Student Engagement Survey the questions: "Did you do your best on this assignment?" and "Did the instruction from the teacher hold your attention in this lesson?" the students scored the fourth lesson lower than the other lessons. Though students are the best indicators of their engagement (Kaiser et al, 2013, p. 82) perhaps they were confused about these questions or they felt they were less engaged in these lessons. There is the consideration of observer bias though the video and

Table 8

Student Engagement Survey Mean Responses

	Observation 1 No Differentiation Math	Observation 2 Differentiated Expectation Math	Observation 3 Differentiated grouping English LA	Observation 4 Differentiated Expectation Math
How often do you really pay attention in class?	4.3	4.6	4.1	4.3
How much time do you do homework each day?	3.3	2.8	2.5	3.3
Did the instruction from the teacher hold your attention in this lesson?	4.6	4.6	4.3	3.6
Was this assignment interesting to you?	4.6	4.5	4.1	3.3
Did you do your best work on this assignment?	4.6	5	4.8	3.3
Did you understand what the teacher wanted you to do for this assignment?	4.6	4.8	4.8	4.3
Did you understand the assignment?	4.6	4.8	4.6	4
Did your teacher give you enough time to complete the assignment?	5	4.6	4.8	4
Does your teacher provide you with an opportunity to participate?	4.3	4.5	4.6	4.3
How often do you miss school without being sick?	4.6	4.6	4.6	5
How often does your mind wander in class?	4.3	3.8	3.6	4
What grade do you anticipate receiving on this assignment?	4.6	5	4.6	4

audio recordings back up the observational notes, which found higher engagement on this fourth lesson observed.

Prior to analysis all observation notes were reviewed and compared to the video and audio recordings to assure completeness of observational notes. Where notes missed an indicator of student engagement or disengagement the observational notes were added to. After verifying the completeness of the observational notes, the notes were coded. The observations had two definite directions, engaged or disengaged. An example of disengagement would be from observation 1, Gifted student Carl appears to be finished and does not touch his paper or pencil for several minutes, laying his head on the table. Then he begins to work on his assignment again. Though Carl was compliant in completing the assignment, the laying of his head on the table may indicate he was not engaged in the assignment. Whereas an example of engagement was found in observation 4 when Frank asks another student, Luke, to check certain parts of his assignment then continues working until the assignment is complete. The observations also demonstrated some of the problems with nondifferentiation such as, students attempt to maintain their focus on a group read aloud. Students kick feet, use lip balm, rub face, play with pens, talk, lay head on their desk, yawn, tap feet, swing legs, practice dance moves, quietly sing, and other such distractors to keep themselves focused or take up time when they are waiting for their nongifted peers to finish an assignment that was easier for them.

The coding process looked at the short repose portion of the Student Engagement Scales students completed post observation. For similar themes Atlas TI and Excel were used to organize data and find consistent themes. First the scales were reviewed to facilitate coding looking for common themes amongst the responses (Table 9). Certain terminology came to the forefront such as engagement, disengagement, persistence, pedagogy (not a term students used but more accurately describes the student responses), effort, and minimal effort, based on the frequency of items which fell into these categories.

Table 9

Themes: Student Surveys

Observation	1	2 ^a	3	4 ^a
Differentiation	1	7	2	6
Disengagement	0	6	4	8
Effort	5	7	2	7
Engagement	8	20	12	10
Minimal Effort	4	5	2	5
Nondifferentiated	3	4	3	4
Pedagogy	2	5	3	3
Persistence	4	3	3	4

^aLesson differentiated in product expectation; # GATE/High Achiever Grouping

Prior to analysis, all post observation teacher interviews were read thoroughly to obtain a basic understanding of the data as well as to uncover appropriate codes considering the tone and implications of the interviews. In a similar process as described above, the codes mimicked the student response

codes as such the same categories were used: engagement, disengagement, differentiation, and pedagogy.

In organizing the data, the surveys and the teacher interviews were reviewed on a question by question basis. Each question is organized in a fashion that the question is then followed by the corresponding answers given by all participants. This was for ease of coding and to verify the aforementioned codes completely represented the survey and interview participants. Once the data had been organized, the responses were analyzed looking for commonalities. To look for these commonalities three or more responses which were similar were considered common. Aside from the common responses any irregular responses or outliers were also presented (Table 10).

Table 10

Themes: Teacher Interviews

Observation	1	2	3	4
Differentiation	0	5	2	6
Disengagement	2	0	2	1
Effort	5	5	1	3
Engagement	4	6	2	3
Minimal Effort	1	1	1	1
Nondifferentiated	2	0	1	1
Pedagogy	2	4	3	4
Persistence	1	3	1	3

Key Findings

The Student Engagement Survey completed by students after the first observation had only one consistency, that all students felt the teacher had given them enough time to complete the given assignment. There were no outliers for this observation. The lesson was a math performance task preparation lesson. The students were given measurements for a bookshelf. They then had to figure out the best placement for designated items such as books, a fish tank, and a video game system. The students had to consider the length, width, and height of the items as well as the size of each shelf on the bookshelf. The lowest mean score was on the second question, "How much time do you do homework each day?" The average was 3.3 or 30 minutes to 1 hour. There were no outliers in observation 1 noted on student completed Student Engagement Scales. Most students, 66%, did note they would persist if they had difficulty with a question. This lesson was whole class and had students of all ability levels present. The assignment, delivery, and expectations were consistent for all students.

The survey results after the second observation demonstrated an average of 2.8 on the question of, "How much time do you do homework each day?" This equates to ten to thirty minutes. Aside from this change, there was little change between the first and second surveys. This lesson was a math lesson in which students had to create a city using 3-dimensional geometric buildings which they constructed from paper, seek building permits (teacher approval), and consider all necessary components within a city (library, hospital, school, etc.). Some students reported boredom with the portion of the lesson in which they were

required to define all of the geometric terms. Overall, students liked the creativity and novelty of the project though they did not find it challenging, in fact one student replied, "It was a little too easy." This was an independent project though 80% of the students surveyed indicated they like to work with other students when they have difficulty with an assignment in math. Most students completing this survey noted they would ask the teacher for assistance if they could not solve a problem. There was a slight lack of interest in the assignment, scoring an average of a 4 out of 5 on the question, "Was this assignment interesting to you?" This lesson was presented whole class, yet had a differentiated assignment as students had different expectations to achieve dependent on their abilities; as an example, gifted students would consider two schools in their town, would the two schools be next to each other or on opposite ends of town?

The post observation survey for the third observation continued to show a decline in the average with regards to the amount of homework done nightly. The students reported this at an average of 2.6 or between less than 30 minutes and 30 to 60 minutes each night. Another consistency was with the question, "Was this assignment interesting to you?" On post observation surveys #2 and #3 as well as observation #4 survey they all came out as an average score of 4. One interesting item is, "How often does your mind wander in class?" The results of each study showed a decline from a 4.3 – seldom, after the first, a 4 after the second, and a 3.7 after the third, occasionally. This observation was a classroom of GATE/High Achiever students, however the assignment was not

differentiated. It was reading a selection from the Language Arts textbook followed by discussion, vocabulary development, and questions to complete.

The fourth observation was a differentiated lesson delivered to a whole class environment. The gifted students were asked to write math questions based on a particular set of parameters while the nongifted students were working on solving printed versions of a similar type of assignment. The gifted students were at two tables and the students with higher math abilities sat at the same table. The second table had both GATE and high achieving students. The GATE students enjoyed this assignment overall, as they wanted to stump the other students at their table. The gifted students worked diligently to write the most difficult questions and then to answer their own questions to assure they were constructed appropriately. They had to provide one correct and one distractor answer to confuse other students. This worked on metacognition, how they learn and what a common incorrect answer would be. Upon reviewing the Student Engagement Scales after this observation, one student proved an outlier across the majority of the survey. The mean on, "Was this assignment interesting to you?" as well as "Did you do your best work on this assignment?" was 4.6 if Luke is removed from the totals. On both of these questions as well as others, Luke scored it a 1. His responses displayed disengagement with written responses such as, "This academic subject is easy; no I don't like working with others; the beneficial assignments are the ones that require less work; and nothing was interesting about this assignment." This observer discovered Luke

would be changing schools within the next two months which could account for some of his disengagement.

The teacher interviews were not the focus of this study however necessary to assure there was nothing out of normal which may have contributed to the students' engagement. The teacher interviews indicated aside from the absence of some students, some due to school absence, some due to the study, some due to testing in another room, there was nothing atypical for each of the observations.

In summary, this study found differentiation was happening in the general education classrooms observed though the differentiation was not always beneficial to the students. The differentiation that considered student abilities and altered the expectation accordingly was beneficial to student engagement, the students were more engaged and put forth more effort with these assignments. Of the fifth-grade students observed one student was beginning to show signs of disengagement, though this may have been due to outside factors as previously discussed.

Implications

The implications of this study are that differentiation is an important component to educating gifted students. The lessons with differentiation of expectations or assignments had the highest amount of observed engagement. The gifted students observed were eager to complete these assignments, relishing the challenge. Just grouping students into a high group, though

technically differentiating in one manner, did not prove beneficial to this group of students. Observed students benefited when their teachers considered the students' abilities when planning an assignment. This "grouping only" differentiation was discussed in a study two decades ago, yet this study found teachers still considered this beneficial differentiation (Westburg, Archambault, Dobyns, & Salvin, 1993, p. 41).

This study found the highest degree of engagement was with students in their general education class while working on a differentiated assignment or a clearly stated higher expectation based on the students' abilities. This is consistent with two of Tomlinson, Brighton, and Herdberg findings. They note effective differentiation: is proactive, employs small groups, varies materials by student, uses variable pacing, is knowledge centered, and is learner centered (2003, p. 140). These lessons, were learner centered and employed small groups. The teacher was available to the gifted students in case there was a need however once the gifted students began their work the teacher was able to work with students of average or lower abilities. This method of differentiation benefited the gifted students observed as well as the general education students.

Summary

This study found the fifth-grade gifted students observed were more likely to be actively engaged in the assignments when the expectation was clearly stated to be higher than their average grade level peers. This was found in

observation two and four when the teachers, were teaching whole class with both general education students and gifted students. In observation four the students were grouped by ability within the whole class environment, had the general education and gifted and high-achiever students working on the same type of assignment. The teacher had the gifted students working toward a different product output clearly stated to the gifted students. The active engagement was high, however there was also a higher ranking on the off task verbal rating. This was likely due to differentiating expectations within a whole class environment.

The third observation found students, though grouped with other students of similar ability, were not engaged in the educational task. Thus, simply regrouping students into ability leveled groups is not beneficial. For the benefit of our gifted students, teachers must consider the need for further adjustments to the expectations and assignments. This class with all higher ability students, though not all identified as gifted, found students passively engaged about four times more frequently than actively engaged. Though the active engagement was less evident, this lesson also had less off task behaviors than the whole class observation number one, the observation with no differentiation.

The difficulties of differentiation within a general education classroom has long been an issue for teachers. This study found that though differentiation was not found in every lesson, it can be successfully accomplished in a general education classroom. Each of these classrooms had about 30 students present

for the observations, thus it was not a minimal student group or unduplicatable within classes across the United States.

With regard to research question 1: Is student engagement altered by use of differentiated curriculum, if so is it increased or decreased with more appropriate assignments for gifted students. This study found the gifted students observed did display more frequent times of engagement with differentiated expectations as well as fewer incidents of off task behaviors. This study also found simply regrouping students without a differentiated lesson, assignment, or expectation was not beneficial to active engagement. Observation three had a higher level of passive engagement though the active engagement was lower than lessons with no differentiation.

Research question two sought to discover if gifted fifth-grade students put forth the same amount of effort with more complex assignments as with easier assignments. This study found the students observed put forth the most effort on the fourth assignment, where the assignment was similar to the assignment of the general education students in the class, yet had a clearly altered final product and expectations for the gifted students. The students while working diligently on the task had a desire to develop difficult questions so as to stump others who would be asked at a later date to complete the student-developed assignment. As reported by the researcher's observational notes, they were more verbally off task but their delight with the assignment was obvious.

Research question three focused on if gifted fifth-grade students showed signs of a lack of student engagement. This study found one student who was showing obvious signs of disengagement. His answers to the student short response questions indicated disengagement, as an example when asked which assignments he found the most beneficial to his learning, his reply was, "The ones with less work." To questions about the interesting or disinteresting components of the assignment he replied, "Nothing." This was the only student clearly disengaged for the majority of the observations. He was not the student with the highest ability in the class. He was, as previously noted, about to leave the school he had been at since kindergarten. This could have had a negative effect on his engagement.

The prior literature suggested that gifted and talented students were more highly engaged as the assignments were differentiated to meet the needs of the gifted students. This study found that to be the case. Clearly stated differentiation with the assignment and expectations for students resulted in the highest degree of engagement. Differentiation with student grouping without clearly stated differentiation did not benefit active engagement with students observed. This study found a higher amount of differentiation than was found in the previous study (Westberg, et al, 1993) though the teachers were aware of the direction of the study and there may have been changes to their regular plan.

Studies have found a need for consistently considering the G.A.T.E. students' abilities with the lesson delivery as well as the actual assignment. The

benefit of this differentiated instruction is to eradicate student disengagement. There is a fundamental need to alleviate boredom and the downward spiral toward dropout (Bridgeland, Dilulio, & Morison, 2006, p. 3). CAG website states there is a need to eliminate underachievement noting underachievement is, “A discrepancy between recognized ability and actual academic performance (CAG). Many experts find a direct link between a lack of engagement and underachievement” (Reis and McCoach, 2000, p. 166; Landis & Reschly, 2013, p. 226; Landis & Reschly, 2013, p. 226). Others find the move between engagement, underachievement, and dropout happened too frequently (Jensen, 2013) which is particularly difficult when considering approximately 20% of these students have significantly above average abilities (Zablowski, 2010, p. 142; Landis and Reschly 2013, p. 221; Peterson, 2009, p. 282).

The study questioned whether the grade level lessons without consideration of the students' abilities would demonstrate more distracted and off-task behaviors. This was found to be true with the highest amount of off task behaviors demonstrated in observation one, which was taught whole class and had no differentiation. It was further hypothesized that the gifted students would find more engagement and enjoyment with lessons and assignments which were differentiated and this was found to be true with the highest enjoyment coming from the fourth observation.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This study was a qualitative investigation as the purpose was to gain information about gifted students and the extent of their engagement demonstrated during differentiated and nondifferentiated lessons. Does the gifted student's education within a general education class meet their needs and encourage engagement? This was a case study seeking to describe the experience of gifted students being educated in general education classrooms. Are the fifth-grade students engaged in their education? Prior studies note a continual downward slide of engagement beginning in sixth grade. Does the disengagement actually begin in fifth grade and become more easily recognized in sixth grade?

The California Association for the Gifted (n.d.) website also notes a lack of differentiation may lead to underachievement,

A discrepancy between recognized ability and actual academic performance. The causes of underachievement may be social, emotional, physical, and/or academic and may originate at home or at school. CAG supports programs that serve all gifted students, not just those who are achieving. Inappropriate curriculum often has as its consequence... the underachieving gifted student. (p. 33)

If this is a working theory, why hasn't there been significant change?

Conclusion

The first research question sought to identify if gifted student engagement was altered by the use of differentiated curriculum. If so, did their engagement increase or decrease with differentiation? This study provided evidence suggesting that during the observations the students were more engaged with differentiation, with a higher amount of engagement with the differentiated assignments and not special groupings of students. The least amount of engagement as reported via the class observations was the lesson and assignment with no differentiation.

The second research question asked if students put forth the same effort with more complex assignments as with easier assignments. The finding indicated that most of the students surveyed put forth the same effort despite the difficulty of the assignment. This study revealed only one of the observed students demonstrated the beginnings of disengagement both in observation and in their responses to the Student Engagement Scale. This student however, did not put forth the same effort, even noting he thought he would get a bad grade on an assignment. This student had a special circumstance that he would be moving to a new school in two months. He has attended the same school for six years. This could be responsible for his early disengagement. However, the majority of students put forth more effort with the more challenging differentiation in product expectation or actual assignment as in the second and fourth observation respectively.

The third research question addressed the beginnings of disengagement particularly, does this study of gifted fifth-grade students shed light on prior research finding that tell of a continual downslide of engagement beginning in sixth grade? If so, what was observed and how does that inform future research? Prior studies (Connor and Pope, 2013, p. 1427) found engagement began to dissipate in the upper elementary years. Kaiser, Retelsdorf, Sudkamp, and Moller, (2013, p. 75) found once engagement begins to disintegrate it is can affect students for years. This study found one student who was showing signs of a lack of engagement. His response to some questions on the Student Engagement Scale while not defiant or completely disengaged but certainly not-interested.

The observations indicated teachers are providing some type of differentiation, though the type and frequency are inconsistent. This is similar to the findings of previous studies (Westberg, et al, 1993). The aforementioned study found differentiation only 16% of the time. In this study, there was a greater amount of differentiation, though some were found to be a benefit to engagement and others, such as grouping with no change in lesson delivery or assignment were less beneficial.

Limitations

The limitations were largely due to the study size and that the participants were of convenience. Due to the steps taken to limit the indicators a smaller

sample size was used. This however resulted in a study that was not generalizable to all populations.

Another limitation would be the students completing the survey in the class after the observation. Some students, particularly gifted students, are very competitive. If they needed clarification of a question they may not have sought information also they may not have devoted the proper amount of time, trying to be one of the first students done. Overall the students did appear to do their best to complete the Student Engagement Instruments as was apparent in their short response questions.

For the purpose of this study the observation required the existing student groups to remain as consistent as possible. Considering this, a random sampling was not used. This may affect the generalizability of this study as students were from similar socioeconomic groups, attended the same school, of similar education levels and age, furthermore the ethnic makeup of the study group was not a representation of most schools or school districts.

Future Research and Recommendations

The recommendation for future research would be to use a larger sample size, including a larger study population would allow more generalizability including students of varied demographics. In the 1990's Westberg et al found there a limited amount of differentiation happening within the classroom, this was not evident in this research, though it was found that teachers may not be providing the best types of differentiation as Tomlinson, Brighton, and Herdberg

describe (2003, p. 113) . Another study would be beneficial to confirm the consistency with regard to the current application of differentiation. Another recommendation would be to observe students in several schools covering a range of family income levels and subgroups. For future study, it would be beneficial to do a direct comparison between the engagement of the general education student and the gifted student while working on differentiated lessons.

This study found one fifth-grade student who was beginning to show signs of disengagement. Future research should be done as to if intervention were in place would engagement be reestablished for such students. This would certainly be a best practice, to observe disengagement, intervene, and potentially changed the outcomes for students.

Teacher Interview Themes

Under the theme of engagement, the observations revealed students who finish their assignments work diligently, take notes, and follow along with teacher directions. An apparent difficulty with engagement was if the lesson was not differentiated the gifted students finished ahead of the allotted time and then spent their time, “straightening items on the table then talking to others nearby” such as this investigator observed. Though this is a better use of time than distracting a neighbor, it is not engagement nor learning.

The gifted students were observed in nondifferentiated lessons to attempt to keep themselves engaged with actions such as kicking feet, tapping their feet on the floor, swinging legs, using lip balm, yawning, and rubbing their face. Then

they resorted to accepting the disengagement and began playing with pens, playing with items in their desk, laying their head on their desk, talking to others, and singing to themselves. For the most part, students were mostly engaged in class even during the class where they were reading aloud whether it came naturally or they had to work to be engaged.

In the theme of persistence, this study revealed the students who completed the Student Engagement Surveys continued to persist when they were unable to solve a problem or answer a question. Examples of responses include, “draw a picture,” “think to the back of my brain until I get it done,” “skip it and come back to it when I am done with the assignment,” “use multiple sources,” “look in the text for an answer,” or “do it again.” When asked what types of assignments were the most beneficial to their learning responses included, “writing because I’m not good at writing,” “facing math,” “because they are challenging,” or “PowerPoints because I am in control.”

With consideration of student effort on assignments, the students reported, “I like to figure out [an answer] by myself as a student in GATE,” preferring assignments that enhanced their reading skills, and finding enjoyment from various academic subjects or assignments.

Implications for Educational Leaders and Educators

The implication for education leaders and teachers would be to increase the number of opportunities for differentiation in the classroom. The increase of

differentiation provided more academic engagement for gifted students which increased learning.

The fourth observations provided a good model of differentiation in a general education classroom. The students were in a whole group environment so there were general education and gifted students present. Each table of students had a different learning target though the task was similar. The general education students were solving math questions, the results lead students to select the correct answer and draw the corresponding part of a picture. The gifted students had to create the questions, drawing directions, and correct and incorrect answer choices. Within the class there was an equal level of engagement for all students as all students were working consistent with their ability level.

The implication for teachers is that differentiation within a general education class is possible. With planning, considering the various academic abilities, supporting the students as they need, differentiation is beneficial for gifted students. As gifted students are engaged in the learning process this allows teachers to focus on the students present in the class that need more academic support. Just as it would not be fair to ask the below grade level students to complete a gifted assignment, it is also not fair to ask gifted students to work below their abilities to complete assignments which are far too easy for the gifted student.

APPENDIX A
INSTITUTIONAL REVIEW BOARD LETTER OF APPROVAL



Academic Affairs
Office of Academic Research • Institutional Review Board

March 18, 2016

Mrs. Charron Rodriguez and Prof. Bonnie Piller
Department of Educational Leadership and Technology
California State University, San Bernardino
5500 University Parkway
San Bernardino, California 92407

**CSUSB
INSTITUTIONAL
REVIEW BOARD**
Full Board Review
IRB# 15050
Status
APPROVED

Dear Mrs. Rodriguez and Prof. Piller:

Your application to use human subjects, titled "The Effects of Differentiated Curriculum on Student Engagement for Gifted Students" has been reviewed and approved by the Institutional Review Board (IRB). The attached informed consent document has been stamped and signed by the IRB chairperson. All subsequent copies used must be this officially approved version. A change in your informed consent (no matter how minor the change) requires resubmission of your protocol as amended. **Your application is approved for one year from March 18, 2016 through March 17, 2017. One month prior to the approval end date you need to file for a renewal if you have not completed your research. See additional requirements (Items 1 – 4) of your approval below.**

Your responsibilities as the researcher/investigator reporting to the IRB Committee include the following 4 requirements as mandated by the Code of Federal Regulations 45 CFR 46 listed below. Please note that the protocol change form and renewal form are located on the IRB website under the forms menu. Failure to notify the IRB of the above may result in disciplinary action. You are required to keep copies of the informed consent forms and data for at least three years. Please notify the IRB Research Compliance Officer for any of the following:

- 1) **Submit a protocol change form if any changes (no matter how minor) are proposed in your research protocol for review and approval of the IRB before implemented in your research,**
- 2) **If any unanticipated/adverse events are experienced by subjects during your research,**
- 3) **To apply for renewal and continuing review of your protocol one month prior to the protocols end date,**
- 4) **When your project has ended by emailing the IRB Research Compliance Officer.**

The CSUSB IRB has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval notice does not replace any departmental or additional approvals which may be required.

If you have any questions regarding the IRB decision, please contact Michael Gillespie, the IRB Compliance Officer. Mr. Michael Gillespie can be reached by phone at [REDACTED], by fax at [REDACTED], or by email at [REDACTED]. Please include your application approval identification number (listed at the top) in all correspondence.

Best of luck with your research.

Sincerely,

Judy Sylva

Judy Sylva, Ph.D., Chair
Institutional Review Board

JS/MG

909.537.7588 • fax: 909.537.7028 • <http://irb.csusb.edu>
5500 UNIVERSITY PARKWAY, SAN BERNARDINO, CA 92407-2393

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APPENDIX B
PARENT INFORMATION FLIER

Flier

The Effects of Differentiated Curriculum on Student Engagement for Gifted Students

Seeking Study Participants

Charron Rodriguez, Doctoral Candidate at California State University, San Bernardino, will be conducting a study at Jasper School.

Parent information meetings are scheduled for _____ and _____ @ 6:00 pm to answer any questions with regard to this study. The meeting will be held in the Multi-Purpose Room at Jasper.

Student participants require a signed parental informed consent. Students will also have the right to decline participation in the study.

Mrs. Rodriguez will be observing students in their regular class schedule and asking some of the students to complete a series of survey questions such as

	Do not agree			Agree strongly	
	1	2	3	4	5
I always try my best in class					

The study will seek to find when gifted students are fully engaged in their education

If you have questions please contact me,
Charron Rodriguez [redacted] or
Dr. Bonnie Piller at [redacted] or at CSUSB [redacted]

12

California State University, San Bernardino
Institutional Review Board Committee
APPROVED 03/18/16 VOID AFTER 03/17/17
IRB# 15050 CHAIR Judy Sylvester

APPENDIX C
STUDENT ENGAGEMENT SCALE

Student Engagement Scale

Example

I am a fifth-grade student

Never	Seldom	Fairly Often	Usually	Always
1	2	3	4	5

Continue to answer the remaining questions on your own in the same manner.

- How often do you really pay attention in class?

Never	Seldom	Fairly Often	Usually	Always
1	2	3	4	5

- How much time do you do homework each day (average)?

None	< 30 min	30 min–1 hr	1–2 hrs	> 2 hrs
1	2	3	4	5

- Did the instruction from the teacher hold your attention in this lesson?

No	Minimally	Partially	Mostly	Absolutely
1	2	3	4	5

- Was this assignment interesting to you?

No	Minimally	Partially	Mostly	Absolutely
1	2	3	4	5

- Did you do your best work on this assignment?

No	Minimally	Partially	Mostly	Absolutely
1	2	3	4	5

- Did you understand what the teacher wanted you to do for this assignment?

No	Minimally	Partially	Mostly	Absolutely
1	2	3	4	5

- Did you understand the assignment?

No	Minimally	Partially	Mostly	Absolutely
1	2	3	4	5

- Did the teacher give you enough time to complete the assignment?

No	Minimally	Partially	Mostly	Absolutely
1	2	3	4	5

- Does the teacher provide you with an opportunity to participate (do they call on you)?

No	Minimally	Partially	Mostly	Absolutely
1	2	3	4	5

Side 2 Student Engagement Survey

- How often do you miss school without being sick?

Never	Seldom	Fairly Often	Usually	Always
5	4	3	3	1

- How often does your mind wander in class?

Never	Seldom	Fairly Often	Usually	Always
5	4	3	3	1

- What grade do you anticipate receiving on this assignment?

A	B	C	D	F
5	4	3	3	1

What do you do when you are unable to solve a problem or answer a question in this subject?

What did you find the most interesting about this assignment?

What was the least interesting about this assignment?

Which types of assignments do you feel are the most beneficial to your learning? Why?

Did your teacher adjust or alter their teaching or assignments today?

Was student participation typical today? Why?

Do you like the academic subject? Why (specifically)?

Do you enjoy working with other students when you are having trouble with your assignments in this subject?

Shapiro, E. S. (2011). *Academic skills problems: Direct assessment and intervention* (4th ed.). New York, NY: Guilford Press.

Dornbusch, S., & Steinberg, L., (2003). *Student Engagement Scale Questionnaire (SEQ)*. Unpublished instrument.

APPENDIX D

PARENT INFORMED CONSENT WITH INSTITUTIONAL
REVIEW BOARD APPROVAL—ENGLISH

Parent or Guardian:

I am Charron Rodriguez, a doctoral candidate at California State University, San Bernardino (CSUSB). I am working on my doctoral degree by doing a study on student engagement, in other words, how students are interested in school and how they work to complete academic tasks. My focus for this study is gifted student engagement and how it changes with classroom instruction, activities, and assignments. My adviser at school is Dr. Bonnie Piller. To do my study I need participants. As part of the study, I will be in the fifth grade class watching the students and taking notes, I will video and audio tape the classes when I am there. I will ask gifted students to complete a 5-point scale set of questions that may indicate their feelings about the assignment or instruction. I may also ask the students questions about their responses related to do how they perceive their involvement in education. All information will be confidential. Observations, video and audio recordings, notes, and surveys will be kept on a secure password protected computer or in a filing cabinet under lock and key. The recordings, observations, notes, and surveys will not be used to improve grades nor will they hinder the students. It is my hope when students and teachers are able to gauge how gifted students learn best, these practices will be used more often.

The Institutional Review Board (IRB) is a group of people in charge of reviewing the studies done by people of the university, like me, to ensure that the rights of everyone that decides to participate in this study are not in danger. The IRB at CSUSB has approved this research and requires that everybody taking part in the study be properly informed.

For the purposes of this study, *The Effects of Differentiated Curriculum on Student Engagement for Gifted Students*, my CSUSB email contact is – [REDACTED]
My academic advisor is Dr. Bonnie Piller. Her contact information is [REDACTED] or a phone message at [REDACTED].

I understand participation in this study holds no academic benefit or harm to my child or myself. Participation is voluntary and can be withdrawn at any time. Any student names will be pseudonyms and not actual names; there will be no personal information of my child, our family, the school, district, or city used in reporting the findings of this study.

I understand there are no foreseeable risks associated with participation or lack of participation in this study. I understand the classroom observations will occur infrequently. I understand that there will be three in class observations each lasting about 30 minutes. Mrs. Rodriguez, investigator, anticipates completion of this study by May 31, 2016.

Please complete the informed consent form on the reverse of this page indicating whether your child may participate in this study. Children for whom an informed consent is not received signed by a parent or guardian will not participate in this study.

California State University, San Bernardino
Institutional Review Board Committee
APPROVED 03/17/16 VOID AFTER 03/17/16
IRB# 15050 CHAIR Judy Sylvia

Parent Informed Consent

____ initial I consent to allowing my child to be audio recorded for the purposes of this study.

____ initial I consent to allowing my child to be videotaped for the purposes of this study.

By signing below, I am consenting to my child _____ participating in this study. I understand Mrs. Rodriguez will be watching students in my child's class. While watching Mrs. Rodriguez will also be, taking notes as well as audio and video recording during learning time, each class observation (three total) will last about 30 minutes. I understand my child may be asked to complete surveys and/or interviews as a part of this study. This part of the study should last less than 15 minutes. I understand my child will not be identified by name, no personal information be released, child facial images, nor voices will be used. All data, video and audio recordings, and notes will be destroyed after seven years. I understand this study is expected to be completed by May 31, 2016. I understand that if I do not consent to my child's participation they will not be included in the study.

Parent/Guardian Signature

Date

Parent/Guardian name printed

Indicate relationship: ____ Father ____ Mother ____ Guardian

Contact information:

Charron Rodriguez at _____

Dr. Bonnie Piller at _____ or a phone message at _____

California State University, San Bernardino
Institutional Review Board Committee
APPROVED 23/18/16 VOID AFTER 23/17/17
IRB# 15250 CHAIR Judy Sylvestre

APPENDIX E

PARENT INFORMED CONSENT WITH INSTITUTIONAL
REVIEW BOARD APPROVAL—SPANISH

Padre o Guardián:

Soy Charron Rodríguez, candidata doctoral en la Universidad Estatal de California, San Bernardino (CSUSB). Estoy trabajando en mi doctorado haciendo un estudio sobre la participación de los estudiantes, es decir, la manera en que los estudiantes muestran interés en la escuela y trabajan para completar las tareas académicas. Mi enfoque para este estudio es en como la participación de los estudiantes superdotados cambia con instrucción en el salón, actividades, y tareas. Mi asesora en la escuela es Dr. Bonnie Piller. Para hacer mi estudio necesito participantes. Como parte del estudio, estaré en el quinto grado observando los estudiantes, tomando apuntes, y grabando audio y video. Les pediré a los estudiantes superdotados que completen una escala de 5 puntos de preguntas que indiquen su sentir acerca de la cesión o las instrucciones. Quizás también les haré preguntas acerca de sus respuestas, específicamente relacionado a cómo perciben su participación en la educación. Toda la información será confidencial. Observaciones, grabaciones de audio y video, apuntes, y encuestas se mantendrán en una computadora segura (protegida bajo contraseña) y en un ordenador seguro (protegido bajo llave). Las grabaciones, observaciones, apuntes y encuestas no se utilizarán para mejorar las calificaciones ni obstaculizarán a los estudiantes. Es mi esperanza que cuando estudiantes y maestros entiendan mejor como es que estudiantes superdotados aprenden más efectivamente, estas prácticas sean aplicadas con más frecuencia.

"The Institutional Review Board" (IRB) es el grupo de personas encargadas de revisar los estudios que llevan a cabo personas de la universidad, como yo, para verificar que los derechos de los que deciden participar en este proyecto no estén en peligro. El IRB en CSUSB ha aprobado este estudio y requiere que todos los participantes estén bien informados.

Para el propósito de este estudio, *Los Efectos de currículo diferenciado en la participación de estudiantes superdotados*, mi correo electrónico de contacto de CSUSB es [REDACTED] y mi asesora académica es la Dr. Bonnie Piller. Su información de contacto es [REDACTED] o un mensaje telefónico al [REDACTED].

Entiendo que la participación en este estudio no tiene ningún tipo de beneficio académico o daño a mi hijo o a mí mismo. Participación es voluntaria y puede retirarse en cualquier momento. Los nombres del estudiante serán seudónimos y no reales; no habrá ninguna información personal de mi hijo, de nuestra familia, escuela, vecindario o ciudad en el reporte del descubrimiento de este estudio.

Entiendo que no existen riesgos previsible asociados con la participación o la falta de participación en este estudio. Entiendo que las observaciones en el salón serán infrecuentes. Entiendo que habrá tres observaciones durante la clase, cada uno durando aproximadamente 30 minutos. La Sra. Rodríguez, investigadora, anticipa la realización de este estudio antes del 31 de mayo del 2016.

Favor de completar el formulario de consentimiento informado en el lado reverso de esta página indicando si su hijo puede participar en este estudio. Los estudiantes que no entregan una forma de consentimiento firmada por un padre o guardián no participarán en este estudio.

California State University, San Bernardino
Institutional Review Board Committee
APPROVED 03/12/16 VOID AFTER 03/17/17
IRB# 15050 CHAIR Judy Sylva

Consentimiento informado para padres

____ *iniciales* Doy mi consentimiento para que mi hija/o sea audio grabado para el propósito de este estudio.

____ *iniciales* Doy mi consentimiento para que mi hija/o a sea grabado en video para el propósito de este estudio.

Al firmar abajo, estoy consciente de que mi hijo/a _____ participará en este estudio. Entiendo que la Sra. Rodríguez observará a estudiantes en la clase de mi hijo. Durante las observaciones, la Sra. Rodríguez también, tomará apuntes, y grabaciones de audio y video durante el tiempo de aprendizaje, cada observación (tres en total) durará aproximadamente 30 minutos. Entiendo que es posible que mi hijo/a complete encuestas o entrevistas como parte de este estudio. Esta parte del estudio debe durar menos de 15 minutos. Entiendo que mi hijo/a no será identificado por su nombre, imágenes faciales, o voz y ninguna información personal se dará a conocer al publico. Todos los datos, grabaciones de video y audio y apuntes serán destruidos después de siete años. Entiendo que este estudio se espera realizar antes del 31 de mayo del 2016. Entiendo que si no autorizo la participación de mi hijo/a, no se incluirá en el estudio.

Firma del padre o Guardián

fecha

Nombre impreso del padre o Guardián

Indicar relación: ____Padre ____Madre ____Guardián

Información de contacto:

Charron Rodríguez : _____

Dr. Bonnie Piller: _____ o un mensaje telefónico al _____

California State University, San Bernardino
Institutional Review Board Committee
APPROVED 03/18/16 VOID AFTER 03/17/17
IRB# 15050 CHAIR Judy Sylvia

APPENDIX F

TEACHER INTERVIEW QUESTIONS

Follow-Up Teacher Loosely Structured Interview Questions

Observation Date _____

Times _____

Do you believe you changed your regular behavior or classroom practice today?

Was the student participation typical today?

Was there anything atypical today? (Absences, particular student behavior)

Clarification of observation instruction and/or assignments

Clarification of student grouping

Clarification of student grouping – Was today's lesson whole group instruction and grade level assignment? Were there any change for gifted, general education, or intervention groups?

Developed by Charron Ann McIntyre Rodríguez

APPENDIX G
TEACHER INFORMED CONSENT

Teacher Informed Consent

_____:

I am Charron Rodríguez, a doctoral candidate at California State University, San Bernardino. I am working on my doctoral dissertation on student engagement, that is, being interested in school and working to complete academic tasks particularly with gifted students. My academic adviser is Dr. Bonnie Piller. I am seeking participants for my study. As part of the study, I will be conducting in class observations and I will ask the students to complete questions that may or may not indicate their level of engagement. I may also ask the students questions about their responses to do with how they perceive their engagement in education. After the lesson (preferably the same day), I will ask you a series of loosely structured interview questions. All information obtained will be confidential. Observations, video recordings, notes, surveys, and interviews will be kept in a secure environment under lock and key. The recordings, observations, notes, surveys, and interviews will not be used to improve grades or will not hinder the students. It is my hope when students and teachers are able to evaluate how students learn best these practices will happen more frequently.

The Institutional Review Board requires all persons participating in studies to be properly informed. This research has been approved by the Institutional Review Board of California State University, San Bernardino.

For the purposes of this study, The Effects of Differentiated Curriculum on Student Engagement for Gifted Students, my CSUSB email contact is – [REDACTED]. My academic advisor is Dr. Bonnie Piller. Her contact information is [REDACTED] or a phone message at [REDACTED].

The purpose of this study is to evaluate gifted students engagement in their classroom instruction, activities, and assignments.

This study will involve class time though there will be very limited time this study will impede on the students regularly scheduled class time and activities. Each observation should last approximately 30 minutes with another 15 minutes to complete the survey. The teacher interview portion should last approximately 30 minutes.

I understand participation or lack of participation in this study holds no other type of advantage, detriment, or implication to participants. Participation is voluntary and can be withdrawn at any time. Any teacher names and student names will be pseudonyms and not actual names, no personal information of myself, my class, the school, or district will be used in reporting the finding of this study.

I understand there are no foreseeable risks associated with participation or lack of participation in this study. I understand the classroom observations will infrequently occur. Mrs. Rodriguez, investigator, anticipates completion of this study by May 31, 2016.

Please complete the informed consent form on the reverse of this page indicating whether or not you will participate in this study.

Teacher Informed Consent

I, _____ consent to participation in this study, The Effects of Differentiated Curriculum on Student Engagement for Gifted Students, being conducted by Charron Rodríguez. I understand this study will include the video and audio recording while I am in class teaching. I understand while in class she will be taking notes and data. After the in class observation she will ask the students to complete a Student Engagement Survey. She will also ask me a series of interview questions. I understand I have the right to decline participation. I understand participation or lack of participation has neither benefit nor detriment to me.

Participant Signature

Date

Participant Name Printed

APPENDIX H

ASSENT

Assent to be read aloud to students before each session

Hello,

This is an assent, which I must read to you. If you have any questions I will have a time for questions once I have finished reading this.

I am Charron Rodríguez. I am a student at CSUSB. To finish my school I have to do a study. I have chosen to study fifth-grade gifted students to see how some assignments affect their participation in learning.

The school requires that all people taking part in a study know what is involved when agreeing to be a part of a study. Engagement

This study will involve me taking notes while watching the class, which will be audio and video recorded, as well as some students completing surveys. This study will have very little effect on your learning time. Is there anyone who does not want to be either audio or video taped for the purposes of this study?

After taking notes by hand as well as on an iPad I will review the notes to look for similar actions or words, seeing what happens most often.

The surveys will be tuned into number values and look for things like the average and outliers.

Being a part of this study does not have either good or bad things for you directly. Taking part will not affect your grades at all. Information gained will not be used for purposes other than this study.

Your parents have allowed me to include you in the study however; you have the right to say you do not want to be a part of this study if you so choose. Is there anyone who wishes not to be a part of this study?

Does anyone have a question?

One last time, is there anyone who does not want to take part?

APPENDIX I
DISTRICT LETTER OF SUPPORT



Alta Loma School District

9390 Base Line Road, Alta Loma, CA 91701
(909) 484-5151

Board of Trustees Members

BRAD BULLER
REBECCA DAVIES
SANDRA OERLY
CARYN PAYZANT
DAVE ROBERTS

JAMES MOORE
Superintendent

March 7, 2016

To Whom It May Concern:

The Alta Loma School District fully supports the study to be conducted by Charron Rodriguez, doctoral candidate at California State University, San Bernardino. She will be working under the advisement of Dr. Bonnie Piller, Chair: The Effects of Differentiated Curriculum on Student Engagement for Gifted Students.

I understand Mrs. Rodriguez will be conducting classroom observations at Jasper Elementary, in which there is a gifted student cluster. Mrs. Rodriguez will use video and audio to record the classroom activities for review and will transcribe selected portions. Parents of students in our school district are asked to sign a photo/video form to secure permission prior to observations. Mrs. Rodriguez will also ask parents to complete a parent consent form to assure parents have a voice in their students participation. She will conduct three observations of the participating class for periods of time between 30 minutes to 1 hour. While in class, she will be taking notes and collecting data on the student engagement. Surveys and interviews will be conducted during the regular school day with minimal disruption to planned classroom activities. She will ask participants to complete a survey and provide information through an interview process to assess perceptions of student engagement levels after the prescheduled observation time. Mrs. Rodriguez will use fifth grade students who have been previously identified as G.A.T.E. students for her target group.

I understand Mrs. Rodriguez will be holding at least one parent meeting and seeking informed consent from all participants before beginning the study. She will also hold a meeting with selected students prior to beginning each observation to read the assent to ensure assure students understand his/her rights to decline participation in the study.

Mrs. Rodriguez anticipates that the study to be completed by May 31, 2016 with minimal disruptions to the learning environment.

Sincerely,

Melinda Early
Associate Superintendent, Ed Services
Alta Loma School District

MELINDA EARLY
Associate Superintendent
Educational Services

STEVE THOMAS, Ed.D.
Associate Superintendent
Administrative Services

FAX: Superintendent (909) 484-5155
Human Resources (909) 484-5160
Educational Services (909) 484-5170
Purchasing (909) 484-5165
Administrative Services/Accounts Payable (909) 484-5175

APPENDIX J
OBSERVATIONAL NOTES

Note. All participant names used in this appendix and elsewhere in the dissertation are pseudonyms.

Observation 1 April 11, 2016

Before students are asked to start writing Carl begins writing

Non gifted student distracted – biting nails

GATE student Frank working while laying head down on table

Non gifted students shouting out while gate students are busy writing items
some gifted students begin shouting out

Gifted student waves hand vigorously to gain attention gifted students are
finished with this portion of assignment, some nongifted still writing

Nongifted out of seat 1 male and 1 female

Gifted tapping his head with his pencil

When gifted student (Carl and Frank) feel they have finished they do not strive to
find more they simply stop

One gifted student (Luke) is frantically waving his whole arm to gain the attention
of the teacher – waves arm for 2 minutes before called on by teacher

Nongifted head on table

Students excited to share ideas with class

Nongifted offers silly response – gifted and nongifted respond in same manner
with nongifted taking longer to get back to academics

Gifted students (Carl and Frank) at 2 different tables off topic talking to neighbors
– they draw in a nongifted student into their off task behaviors - this happens
immediately with the second gate student originating the off task talk

Non gifted jumps up and stands from seat twice then his hat falls to the ground
and he picks it up

Teacher states measurement of binder and then gifted student holds book up to
binder for a physical demonstration of the discussion - Carl playing with face -
Frank chewing on shirt

Gifted students follow teacher direction along with nongifted all appear to get
started at the same time

Nongifted student playing with book and draws gifted student Carl in

Gifted students answer questions before checking for visual reference as directed by the teacher

Carl and Frank play with their face while listening to teacher directions

When given time constraints gifted get started right away. While many nongifted appear to utilize think time of direction before getting started

Gifted students appear to have a consistent work form that blocks work from others view one – Frank turning his back completely on the student who is sitting right next to him

One gifted student Frank flipping his pencil so much that it fell and had to be retrieved

Nongifted tries to draw F into conversation he does not participate

Nongifted seeks teacher approval, "What do you think of mine?"

Another nongifted gets up and brings paper to teacher clarifying directions a full 10 minutes after directions

Frank appears to fidget when concentrating such as flicking pencil and scratching head

Carl appears to be finished and does not touch his paper or pencil for a few minutes – laying head on table then gets started on assignment again

Bri continues to work from start of time to end of time

Observation 2 Notes

George organizes papers not looking at teacher

Mitchel raises hand to offer response while he is circling the answers

George begins following along, hands on desk

Sophia raises hand and while waiting for teacher to call on her she flips through to “preview” assignment

Bri gets items from pencil bag to highlight specific details, then works diligently talking to herself as she works

Sammi visually follows teacher movement through class

Victoria works on task, talks herself through problem

Gifted student protests the need to look up and write the academic vocabulary

Nongifted student comes to table with gifted students and begins conversation. When teacher corrects nongifted student Mark and Luke both diligently get to work

Carl protests difficulty of assignment but continues to work

Luke spends time off task – separating and fiddling with “reward” tickets. Then gets started again on the assignment

Victoria takes notes then plays with sock and back to notes

Mark moves ahead of the class, after 30 minutes stretches and yawns – kicking feet under chair

Frank bites fingers, looks to others to evaluate their progress, then works on task again

After the geometry look up portion gifted students are rapidly seeking out building permits (teacher approval) and constructing their 3-dimensional buildings as part of their cities

The final project took several class periods

Observation 3 Notes April 13, 2016

Silent reading 3 of 4 Gifted students are not participating while nongifted students are

Gifted and nongifted are equally distracted through teacher directions

Mark appears to follow along while text is being read aloud though his head is down on the desk

Victoria appears to be following along

Garrett moves head with the reading though he appears to read ahead of the group. -Garrett again gets distracted then does not even follow along

As Garrett reads he is actively engaged – following his turn reading he quickly becomes disengaged – not following along while others read

Luke does not volunteer at all

Mark follows along intently through the entire story as it is read aloud

Luke stretches and starts to follow teacher direction then teacher comes to give him a special direction which is harder though still at a low level

Gifted and nongifted are equally participating and distracted

Luke returns dictionary then goes to teacher to discuss “special” task

Gifted students had unfamiliar words in their reading just as the nongifted students though gifted had one while nongifted had about 1 in each paragraph – gifted students and nongifted students volunteer to define the unfamiliar words of peers

Luke is bored and yawns

All students are focused overall and use a variety of strategies to try to maintain their interest (kicking feet, using Chap stick, rubbing face, playing with pens, laying head on desk, playing with items in desk, yawns, tapping feet on floor, swinging legs

Some students, GATE and non-GATE, work then chat to a neighbor then focus again

Garrett and non-GATE student chat then Garrett yawns

Luke presents definition to class and appears happy with his contribution

Garrett yawns again

Vinny appears to mimic his nongifted neighbor rocking back and forth to maintain focus

Garrett then begins to play with the dried hair gel in his hair Garrett then corrects the pronunciation of a nongifted student he continues to play with hair gel

Observation 4 Notes April 13, 2016

Initially gifted student Frank is distracted not giving any time to the project. Then once he begins he works diligently for several minutes asking and answering questions of his neighbors

Carl is working diligently on the project for the majority of the time - He does look at his peer's paper to see the progress of his nongifted peer

Non gifted peer comes to review Frank's paper

Teacher has to come to table with several gifted students to get them to focus

Frank physically displays his statement

Non gifted peer throws something small at Carl and he continues to work diligently

Gifted students differ – some diligently work for the majority of the class on their projects others work and talk then work then talk

All of class works with conversation – the conversation for the most part appears to be on task.

When Carl gets frustrated with assignment he hits his fists on desk then goes to talk to the teacher

This lesson was differentiated with the higher complexity of the assignment going to the gifted students, then the gifted/high achieving students

Frank sings a song to himself then gets back to work

Carl talks to his nongifted peer about their table's assignment

Frank continues to talk to his neighbor and work on the assignment intermittently asking Luke to check certain parts of his assignment then continuing – occasionally playing with his pencil or other distracted motions

It is a busy class with students diligently working on the assignments at their ability level

Frank gets serious about the completion of his assignment and works on the assignment a higher percentage of the time then tells the teacher another student at the table is talking – she stands by table and Frank works diligently

When Carl is finished with his assignment he shows it to the teacher then to the students at the highest ability table apparently seeking approval

Carl then uses his time to straighten items on the table then talks to others near him

Gifted student takes leadership roll helping a nongifted student to understand the assignment

APPENDIX K
STUDENT SURVEY RESPONSES

Student Survey Responses - Observation 1

How often do you really pay attention in class?	5	4	4
How much time do you do homework each day?	3	4	3
Did the instruction from the teacher hold your attention in this lesson?	5	5	4
Was this assignment interesting to you?	5	5	4
Did you do your best work on this assignment?	5	5	4
Did you understand what the teacher wanted you to do for this assignment?	5	5	4
Did you understand the assignment?	5	5	4
Did your teacher give you enough time to complete the assignment?	5	5	5
Does your teacher provide you with an opportunity to participate?	5	5	3
How often do you miss school without being sick?	4	5	5
How often does your mind wander in class?	5	4	4
What grade do you anticipate receiving on this assignment?	5	5	4
What do you do when you are unable to solve a problem or answer a question in this subject?	Draw pictures, ask questions	Ask my teacher	Try again
What did you find the most interesting about this assignment?	It challenges your brain to use all the measurements to fit on the shelf.	the shelves	The waiting (when I'm done with the problem)

What was the least interesting about this assignment?	Writing what you could put on the shelf.	nothing	The drawing
What types of assignments do you feel are the most beneficial to your learning? Why?	Talk with a partner	All of it because some of it is new	Independent
Did your teacher adjust or alter their teaching or assignments today?	No	yes	I don't know
Was student participation typical today? Why?	Yes, because it was challenging and fun.	Yes because they were participants	Yes, because that's what I do
Do you like the academic subject? Why?	Yes, I like multiplying and figuring measurements	Yes, I like math because it is easy.	Yes, because it's just what seems easy to me
Do you enjoy working with other students when you are having trouble with your assignments in this subject?	Yes, because they might know what your trouble/problem is.	Yes	NO!

Student Survey Responses - Observation 2

How often do you really pay attention in class?	5	4	5	4	5
How much time do you do homework each day?	2	3	3	3	3
Did the instruction from the teacher hold your attention in this lesson?	5	5	5	3	5
Was this assignment interesting to you?	5	5	5	3	4
Did you do your best work on this assignment?	5	5	5	5	5
Did you understand what the teacher wanted you to do for this assignment?	5	4	5	5	5
Did you understand the assignment?	5	5	5	5	4
Did your teacher give you enough time to complete the assignment?	5	4	5	5	4

Does your teacher provide you with an opportunity to participate?	5	4	5	3	5
How often do you miss school without being sick?	5	4	5	4	5
How often does your mind wander in class?	4	4	3	4	4
What grade do you anticipate receiving on this assignment?	5	5	5	5	5
What do you do when you are unable to solve a problem or answer a question in this subject?	Use multiple sources	I ask for help or I skip it and come back to it when I am done with the assignment.	I ask for help.	I will ask for help or to explain	I think to the back of my brain until I get it done.
What did you find the most interesting about this assignment?	creating a project	We got to build a city.	Everything	Everything.	We are building a city
What was the least interesting about this assignment?	it was a little too easy	The definitions of every shape.	Nothing	Nothing.	We have to get permits and stuff like that before we build it.
What types of assignments do you feel are the most beneficial to your learning? Why?	I think projects are the most beneficial because it entertains us	I think visual learning like a PowerPoint or a picture is most beneficial.	Math, because I'm very strong in math and it's my favorite subject.	Topic Tests, and enhancement. I get better at the subject	PowerPoints because I feel like I am in control

Did your teacher adjust or alter their teaching or assignments today?	No	No, my teacher didn't.	Yes, because today went by fast and everyone was focused.	No, he didn't	Yes.
Was student participation typical today? Why?	Yes because we were creating something	Yes, because everyone was interested in the assignment.	Yes, because not everybody does things like this.	Yes, it is typical.	No because usually a lot of people raise their hands or want to read.
Do you like the academic subject? Why?	yes because it is shapes and problem solving	I do my favorite subject is math because I like solving problems.	Yes, because I think it's very interesting	Of course, It is interesting in many ways.	Yes, because Math is fun.
Do you enjoy working with other students when you are having trouble with your assignments in this subject?	yes	I do because I get to hear their input on the subject.	Yes, because they can help me and I can help them.	No, I like to figure out a way so I get smarter by myself as a student in gate, and in Mr. Q's class. And for sixth grade.	

Student Survey Responses - Observation 3

How often do you really pay attention in class?	2	5	5	4	4	5
How much time do you do homework each day?	2	2	3	3	2	3
Did the instruction from the teacher hold your attention in this lesson?	3	5	5	4	4	5
Was this assignment interesting to you?	2	5	4	5	4	5
Did you do your best work on this assignment?	4	5	5	5	5	5
Did you understand what the teacher wanted you to do for this assignment?	4	5	5	5	5	5
Did you understand the assignment?	4	5	5	5	4	5
Did your teacher give you enough time to complete the assignment?	5	5	4	5	5	5

Does your teacher provide you with an opportunity to participate?	4	5	5	4	5	5
How often do you miss school without being sick?	5	5	4	4	5	5
How often does your mind wander in class?	2	4	4	4	4	4
What grade do you anticipate receiving on this assignment?	4	5	5	4	5	5
What do you do when you are unable to solve a problem or answer a question in this subject?	Ignore it & let someone else do it	Use multiple sources	I keep on looking in the text for an answer.	Ask for help.	I think till I get it done right	I ask for help.
What did you find the most interesting about this assignment?	Silent Reading	The story we read.	The camera.	We are writing an essay	Everything	Silent Reading
What was the least interesting about this assignment?	The actual work	The map we were doing.	Nothing.	We have to make a map	Nothing	The actual work

What types of assignments do you feel are the most beneficial to your learning? Why?	Ones that don't involve lots of work because I don't do well on long assignments	I think when you can see things visually that is beneficial because you can see the objective	The D.B.Q. it enhances my reading skills.	I think these assignments are Math.	Math, because I'm strong at math and it's my favorite subject.	Ones that don't involve lots of work because I don't do well on long assignments
Did your teacher adjust or alter their teaching or assignments today?	I don't know	Yes, they did.	No.	Yes.	Yes.	I don't know
Was student participation typical today? Why?	Yes, because I don't think the students knew there was a camera	Yes, because many people participated.	Yes, because the teacher said to be ourselves.	yes, because it was very normal.	Yes because almost everyone participated.	Yes, because I don't think the students knew there was a camera
Do you like the academic subject? Why?	No, because it involves lots of work	Yes, because I like reading stories.	Yes, the learning.	No, I do not like writing.	Yes.	No, because it involves lots of work
Do you enjoy working with other students when you are having trouble with your assignments in this subject?	No, I like them doing it for me.	Absolutely, because I get their input.	Yes, it gives me a better understanding	yes, I like to be taught and teaching things to other kids	Yes, because they can help me and I can help them.	No, I like them doing it for me.

Student Survey Responses - Observation 4

How often do you really pay attention in class?	5	4	4
How much time do you do homework each day?	3	3	4
Did the instruction from the teacher hold your attention in this lesson?	5	1	5
Was this assignment interesting to you?	4	1	5
Did you do your best work on this assignment?	4	1	5
Did you understand what the teacher wanted you to do for this assignment?	5	3	5
Did you understand the assignment?	4	3	5
Did your teacher give you enough time to complete the assignment?	4	3	5
Does your teacher provide you with an opportunity to participate?	5	3	5
How often do you miss school without being sick?	5	5	5
How often does your mind wander in class?	5	3	4
What grade do you anticipate receiving on this assignment?	5	2	5
What do you do when you are unable to solve a problem or answer a question in this subject?	I ask a friend	Do it again	Ask my teacher
What did you find the most interesting about this assignment?	Making your own questions	Nothing	The math
What was the least interesting about this assignment?	Finding the answer to the problems	Nothing	nothing

What types of assignments do you feel are the most beneficial to your learning? Why?	Facing math, because they are challenging	The ones with less work	writing because I'm not good at writing
Did your teacher adjust or alter their teaching or assignments today?	Yes we had to make up questions	I don't know	yes
Was student participation typical today? Why?	No, because we made up questions	Yes, because this is what we do	yes because students were participating
Do you like the academic subject? Why?	Yes, because it was my favorite (decimals)	Yes, because it's easy	because I like math and we did math
Do you enjoy working with other students when you are having trouble with your assignments in this subject?	Yes,	No	Yes

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